JVC

SERVICE MANUAL

MODEL
DD-7 A/B/C/E/J/U
STEREO CASSETTE DECK

No. 4195
January 1981

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Specifications

Type : Component stereo cassette deck
Track system : 4-track, 2-channel
Tape speed : 1-7/8 inch/sec (4.8 cm/sec)
Frequency response :
(0dB recording)
  Metal tape *1 : 25–12,500Hz ±3dB (Typical)
  SA/Chrome tape *2 : 25–8,000Hz ±3dB (Typical)
  SF/Normal tape *3 : 25–8,000Hz ±3dB (Typical)
(–20dB recording)
  Metal tape *1 : 15–2,000Hz (Nominal)
    25–18,000Hz ±3dB (Typical)
  SA/Chrome tape *2 : 15–20,000Hz (Nominal)
    25–18,000Hz ±3dB (Typical)
  SF/Normal tape *3 : 15–19,000Hz (Nominal)
    25–17,000Hz ±3dB (Typical)
Surpasses DIN 45 500.
  Note: *1 ... SCOTCH METAFINE or Equivalent
    *2 ... TDK SA or Equivalent
    *3 ... MAXELL UD or Equivalent
S/N ratio : 60dB (from peak level, weighted, Metal tape)
  The S/N is improved by 5dB at 1kHz and by 10dB above 5kHz with ANRS/DOLBY B on.
  (DIN 45 500 weighted)
Effect of Super ANRS : (normal tape)
  Improvement of S/N : the same as with ANRS/DOLBY B
  Improvement of frequency response:
    0dB recording ; 6dB at 10kHz
    +5dB recording ; 12dB at 10kHz
  Improvement of distortion:
    0dB recording ; 3% or less at 10kHz
    +5dB recording ; 3% or less at 10kHz
Wow and flutter : 0.021% (WRMS), (with JVC test tape)
  0.06% (DIN 45 500)
Crosstalk : 65dB (1kHz)
Harmonic distortion : K3; 0.4% THD; 1.0% (metal tape, 1kHz 0 VU)
Bias : AC bias
Erasure : AC erasure
Heads : 3 heads
  SEN ALLOY head for recording, SEN ALLOY X cut type for playback and two-gap SEN ALLOY head for erasure.
Motors : Quartz look pulse servo DC motor (for Capstan)
  DC motor (for Reel)
Fast forward time : 85 sec or less with C-60 cassette
Rewind time : 85 sec or less with C-60 cassette
Semiconductors : 11 ICs, 78 transistors, 42 diodes, 13 LEDs, 2 Hall elements.
Input terminals
  Mic jack x 2 : Max. sensitivity; 0.2mV (–72dBs)
    Matching impedance; 600Ω – 10kΩ
  Input jack x 2 : Min. input level; 80mV(–20dBs)
    Input impedance; 100kΩ
Output terminals
  Output jack x 2 : Output level; 0–500mV
    Output impedance; 5kΩ
  Phones jack x 1 : Output level; 0–0.6 mW/8Ω
    Matching impedance; 8Ω – 1kΩ
Power requirement : AC 120V, 60Hz (DD-7C/J)
  AC 240/220/120V, 50/60Hz (DD-7 A/B/E)
  AC 240/220/120/100V, 50/60Hz (DD-7U)
Power consumption : 30W
Dimensions : 17-3/4″ (450 mm) W
  4-3/8″ (110 mm) H
  13″ (330 mm) D
Weight : 15.4 lbs (7.0 kg)

Design and specifications are subject to change without notice.

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Features

1. Two-motor full-logic mechanism with quartze-locked pulse-servo D.D. motor.
   - A quartze-locked pulse-servo D.D. motor newly developed for capstan drive and a DC motor for reel drive.
   - Low wow/flutter (WRMS 0.021%)
   - TIMER STANDBY mechanism (with maloperation protection)
   - AUTO-REWIND mechanism
   - Remote control terminal provided
2. Metal tape compatible
3. Three-head system permitting monitoring while recording is being made
   - X-cut SA (Sen-Alloy) combination record/playback head
   - 2-gap SA erase head
   - 3-position tape select switch
4. 2-color FL digital meter (PEAK/VU selectable) with peak hold function
5. DC configured record/playback amplifier
6. Recording equalization level (REC EQ) continuously variable
7. ANRS/DOLBY B and Super ANRS incorporated
8. Headphones in connection with slide system output level control
9. Record muting (REC MUTE) mechanism (with operation indicator LED)
10. New slim design with push button switches

Controls and Connections

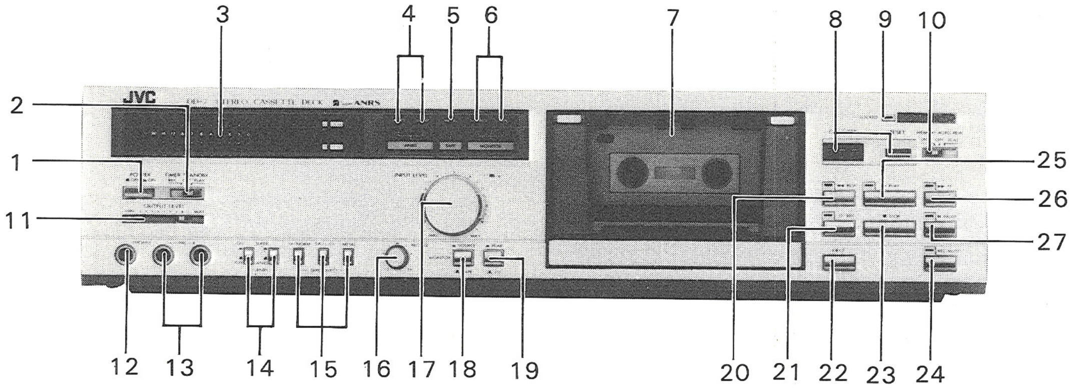


Fig. 1

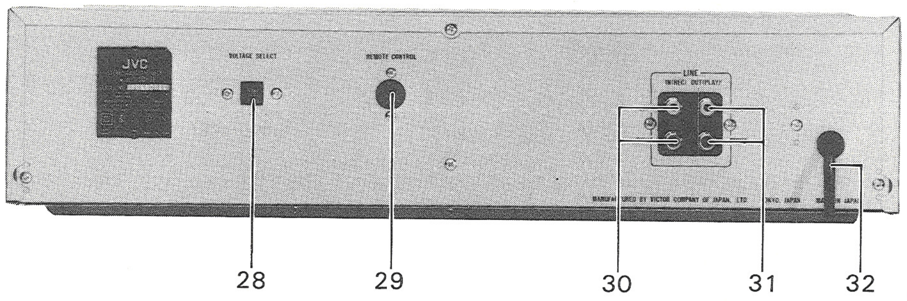


Fig. 2

1. POWER switch
2. TIMER STANDBY switch
3. FL level indicator
4. ANRS indicator (SUPER, ANRS)
5. METAL tape indicator
6. Monitor indicator (SOURCE, TAPE)
7. Cassette holder
8. Tape COUNTER/counter reset button
9. Quartz lock indicator (LOCKED)
10. AUTO REWIND switch
11. OUTPUT LEVEL control
12. Headphone jack (PHONES)
13. Microphone jack (MIC)
14. ANRS switch (ANRS/DOLBY B-OFF, SUPER-ANRS/DOLBY B)
15. Tape select switch (SF/NORM, SA/CrO_2, METAL)
16. REC EQ control
17. INPUT LEVEL control
18. Monitor switch (TAPE, SOURCE)
19. Meter select switch (PEAK, VU)
20. REW (Rewind) button (◀◀) with indicator.
21. REC (Record) button (○) with indicator
22. EJECT button
23. STOP button
24. REC MUTE button with indicator
25. PLAY button (▶) with indicator
26. FF (fast-forward) button (▶▶) with indicator
27. PAUSE (▮▮) button with indicator
28. Voltage select switch (DD-7 B/E/U)
29. REMOTE CONTROL socket
30. LINE IN (REC) terminals
31. LINE OUT (PLAY) terminals
32. Power cord

Main Parts Location

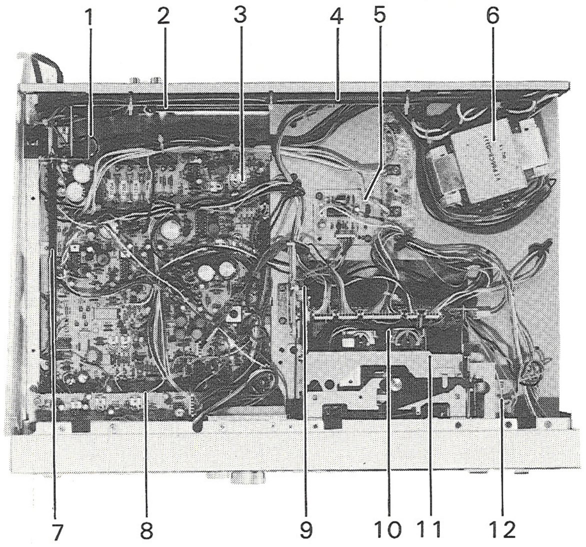


Fig. 3

1. Power switch P.W.B. ass'y
2. Pin jack ass'y
3. Main amp P.W.B. ass'y
4. Remote control socket
5. Connector P.W.B. ass'y
6. Power transformer
7. Remote bar for power switch
8. FL indicator ass'y
9. Gear-oiled damp brake
10. Mecha. control P.W.B. ass'y
11. Mecha. assembly
12. Hall IC P.W.B. ass'y

Front-view

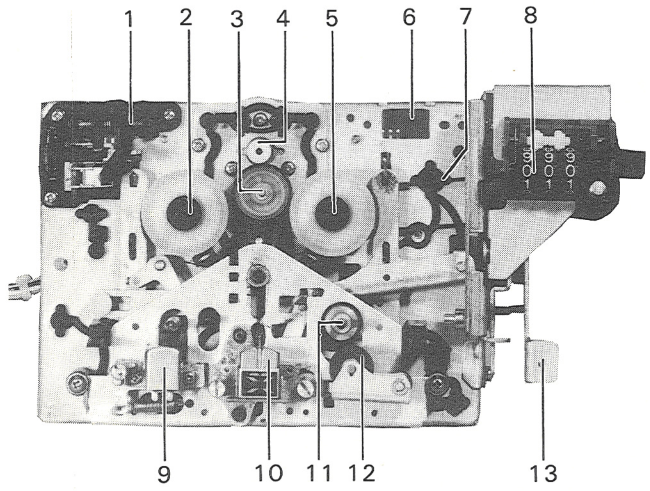


Fig. 4

Top view

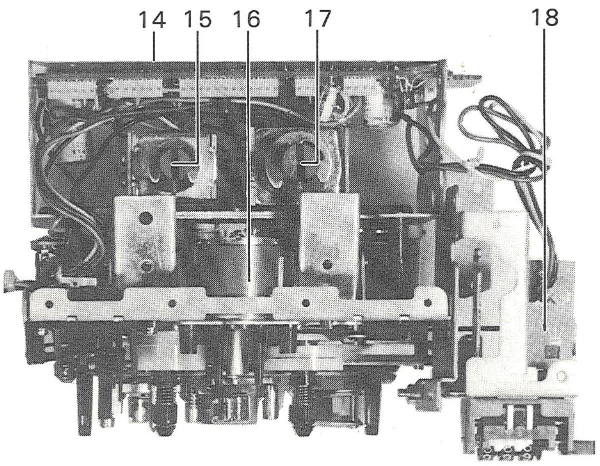


Fig. 5

(Mechanical Parts)

1. Switch holder (L)
2. Supply reel disc
3. Idler ass'y
4. Reel motor pulley
5. Take up reel disc
6. Switch holder (R)
7. Counter belt
8. Counter
9. Erase head
10. REC/PB head
11. Capstan (Direct drive Motor shaft)
12. Pinch roller ass'y
13. Eject lever
14. Mecha. Control P.W.B. ass'y
15. Brake solenoid
16. Reel motor
17. Play solenoid
18. Hall IC P.W.B. ass'y

Description on New Technology

■ Direct Drive (D.D.) Motor

1. Introduction

This motor is an opposed-plane no-commutator motor which incorporates an RPM detecting mechanism (FG) as shown in Fig. 6. The rotor consists of drive magnets and that combination of a Zn diecasting flywheel and FG magnets which enhances the effect of the flywheel.

The four pairs of drive magnets (8 poles), magnetically attached in one plane, and their opposed plane yoke form the magnetic circuit. Since the plane yoke is of slotless construction, motor torque unbalance (cogging) due to magnetic unbalance hardly occurs. In addition, the two Hall elements and four drive coils, supported by a PC board, are positioned between the drive magnets and the plane yoke as shown in Fig. 7.

The four drive coils are wound as a group of coils having 4 phases. To average the magnetic attractive and repulsive forces generated by coil current or to reduce the flux leakage due to coil current as much as possible, the two drive coils of the phase difference (phases 1-3 and 2-4) of 180° electrical angle are separately wound in parallel and at the same time the other two coils of the same phase are positioned at a mechanical angle of 135°.

The FG magnets of 204 poles are arranged magnetically precise in one place. The RPM signal output in proportion to the RPM is obtained by the detecting coil formed on the PC board etched at the same pitch as that of the poles of the FG magnets. At the same time, the detecting coil is placed around the overall circumference of the rotor to detect the RPM signal output as the full-circumference integration value to obtain a high-accuracy RPM signal output.

2. Operating principle

In state I shown in Fig. 8, when Hall element H1 is activated by rotor pole N1, transistor Tr-1 shown in Fig. 4 goes ON and then a coil current flows in drive coils W2 and W'2 in the direction shown in Fig. 3. By flow of the coil current, an N pole appears over W2 and an S pole over W'2. Thereby, the attractive and repulsive forces, both shown in this diagram, are produced, thus generating a torque in the direction shown in this diagram. The rotor rotates by this torque.

Next, when the rotor starts rotating to reach state II, Hall element H2 is activated by rotor pole N1. Thereby, transistor Tr-3 goes ON and a coil current flows in drive coils W3 and W'3. By flow fo this coil current, an S pole appears over W3 and an N pole over W'3. Thereby, the attractive and repulsive forces are produced, thus generating a torque. The rotor rotates by this torque.

In states III and IV, motor torque is produced in the same manner as above. The rotor rotates by this torque. The rotor continues to rotate by repeating the process of I~IV. As the rotor moves only 1/4 rotation in this process, four repetitions of this process provide one motor rotation.

Construction of D.D Motor

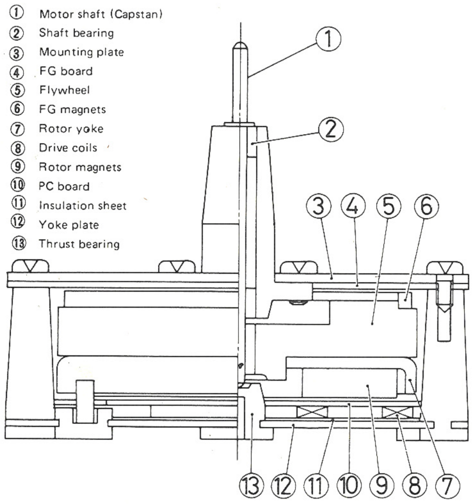

① Motor shaft (Capstan)
② Shaft bearing
③ Mounting plate
④ FG board
⑤ Flywheel
⑥ FG magnets
⑦ Rotor yoke
⑧ Drive coils
⑨ Rotor magnets
⑩ PC board
⑪ Insulation sheet
⑫ Yoke plate
⑬ Thrust bearing
①
②
③ ④ ⑤ ⑥
⑬ ⑫ ⑪ ⑩ ⑨ ⑧ ⑦

Fig. 6

Arrangement of Drive Coils and Hall Elements

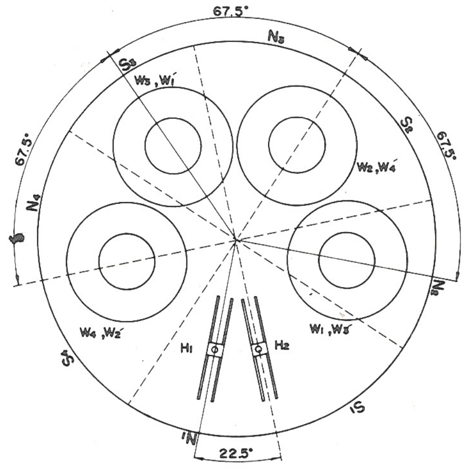
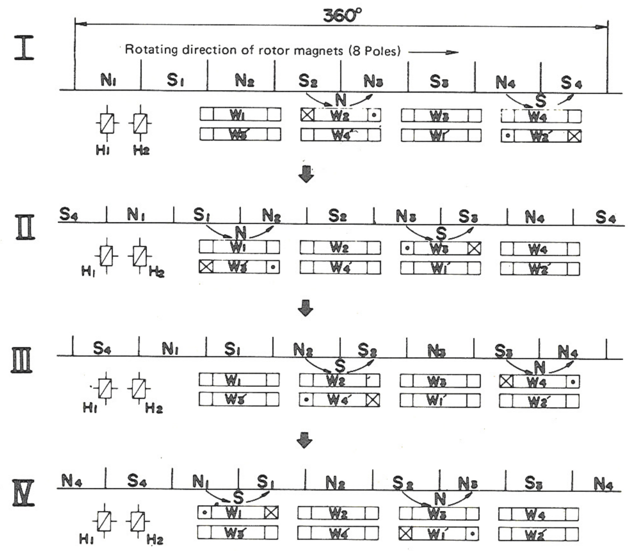

67.5°
N3
S3
W3 ,W1'
S2
67.5°
W2,W4'
67.5°
N4
S
N2
W4 ,W2'
W1 ,W3'
H1
H2
S4
S
N
22.5°

Fig. 7

Description of Motor Operation


360°
Rotating direction of rotor magnets (8 Poles)
I
N1
S1
N2
S2
N3
S3
N4
S4
N
S
W1
W2
W3
W4
W3'
W4'
W1'
W2'
H1
H2
II
III
IV

	Rotor Position		Coil Current			
	H1	H2	W1 ,W1'	W2 ,W2'	W3 ,W3'	W4 ,W4'
I	N	—		ON		
II	—	N			ON	
III	S	—				ON
IV	—	S	ON			
I	N	—		ON		

Fig. 8

Operating Principle of Phase Selector Circuit

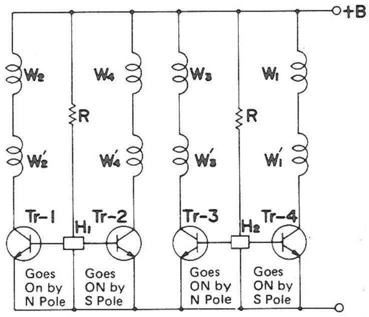

+B
W2
W4
W3
W1
R
R
W2'
W4'
W3'
W1'
Tr-1
Tr-2
Tr-3
Tr-4
H1
H2
Goes On by N Pole
Goes ON by S Pole
Goes ON by N Pole
Goes ON by S Pole

Fig. 9

Block Diagram for FG Control System

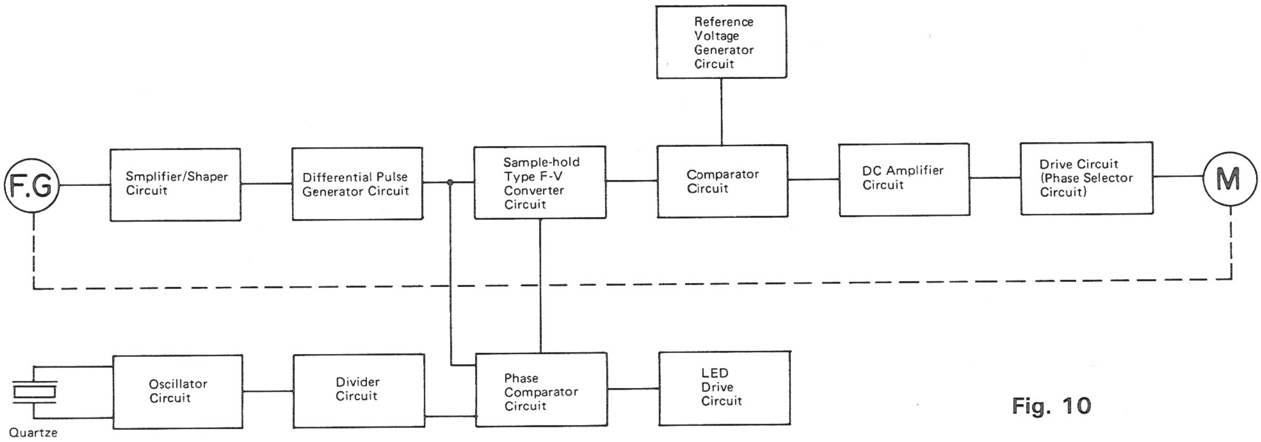

Reference Voltage Generator Circuit
F.G
Smplifier/Shaper Circuit
Differential Pulse Generator Circuit
Sample-hold Type F-V Converter Circuit
Comparator Circuit
DC Amplifier Circuit
Drive Circuit (Phase Selector Circuit)
M
Oscillator Circuit
Divider Circuit
Phase Comparator Circuit
LED Drive Circuit
Quartze

Fig. 10

Schematic Diagram of D.D Motor

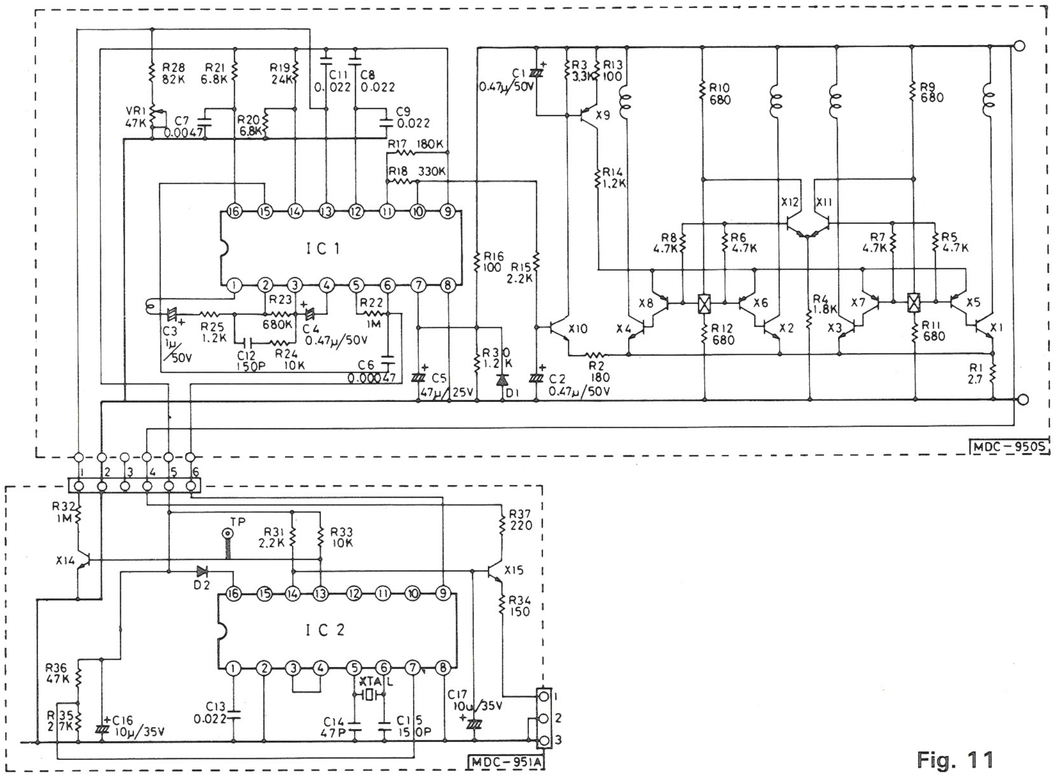

R28 82K
R21 6.8K
R19 24K
C11 0.022
C8 0.022
VR1 47K
C7 0.0047
R20 6.8K
C9 0.022
R17 180K
R18 330K
IC 1
R23 680K
C4 0.47μ/50V
R22 1M
C3 1μ/50V
R25 1.2K
C12 150P
R24 10K
C6 0.0047
C5 47μ/25V
R16 100
R15 2.2K
R3 3.3K
R13 100
C1 0.47μ/50V
X9
R14 1.2K
R10 680
R9 680
X12
X11
R8 4.7K
R6 4.7K
R7 4.7K
R5 4.7K
X8
X6
R4 1.8K
X7
X5
X10
X4
R12 680
X2
X3
R11 680
X1
R1 2.7
R3 10 1.2K
D1
C2 0.47μ/50V
R2 180
MDC-950S
1 2 3 4 5 6
R32 1M
TP
R31 2.2K
R33 10K
R37 220
X14
D2
X15
R34 150
IC 2
R36 47K
R35 27K
C16 10μ/35V
C13 0.022
XTAL
C14 47P
C15 150P
C17 10μ/35V
1 2 3
MDC-951A

Fig. 11

3. Features

(1) High-precision FG
Stable servo system is assured by use of the full-circumference integration type high-precision FG in which 204 poles are magnetically attached.

(2) Low wow/flutter
No-cogging slotless construction, high-precision members, and stable servo system realize a wow/flutter of the order of WRMS 0.02%.

(3) Compactness
Slim design with full length of 27.2 mm.
Because the drive board is united with the motor, the motor operates by simply connecting it to a power supply.

(4) Stable operation
The rotor is attracted in one direction at all times because of slotless construction. Therefore, stable operation is obtained even when the set is laid on its side.

(5) Improved reliability
The mechanical contact sections are confined to the motor shaft and its bearing and coil current is switched in the solid state. Moreover, high-stability metal film resistors and high moisture-resistance polypropylene capacitors are employed. Therefore, reliability is sharply improved as compared with conventional brush motors.

(6) Stable servo system
The time constant of LPF is extremely small due to the sample-hold type F-V converter. Thereby, excellent response and operating characteristics are obtained.

(7) Low torque ripple
Hall elements with favorable property, auto-balancing circuit for automatically compensating for difference in characteristic between these elements are employed, with improved installation form of magnets. Thus, torque ripple is reduced.

(8) Newly developed motor control IC
The number of components are greatly reduced through employment of the motor control IC newly developed by JVC, thus permitting improved reliability with high compactness. Further, QL (quartze lock) control system is easily realized by the addition of QL unit.

(9) Newly developed QL circuit
The number of components are greatly reduced through employment of the QL circuit newly developed by JVC, thus permitting improved reliability with high compactness.

■ Two-solenoid mechanism with real-time pause function

Conventional electronic control mechanisms (KD-A6, -A8, -A7 and -A77) with real-time pause function are 3-solenoid types. The newly developed mechanism (DD-7) is capable of real-time pause function with 2 solenoids.

KD-A6 (3-solenoid type]
Brake solenoid : Lifts the slide base up to the play position
Lock solenoid : Locks the slide base located at the play position and at the same time releases brake.
Pause solenoid : Releases the pinch roller from the capstan. (Pause mode)

DD-7 (2-solenoid type)
Play solenoid : Lifts the silde base up to the play position and at the same time releases the pinchs roller from thecapstan.
Lock solenoid : Locks the slide base located at the play position and at the same time releases brake.

- **Operation**
When the play solenoid goes ON, the slide base is lifted. At the same time, the pinch roller is released from the capstan through the other lever. Thus, the pause mode is reached at the moment of play. While the play solenoid is ON, the lock solenoid goes ON, thus releasing the brake and at the same time locking the slide base placed at the play position.
At this time, when the brake solenoid goes ON, the pinch roller being away from the capstan is released. The pinch roller is thereby brought into contact with the capstan and the play mode is reached for the first time. During play, the pause mode is reached when the pinch roller is released again from the capstan by turning ON the play solenoid.

Attracting direction of play solenoid and moving direction of slide base.

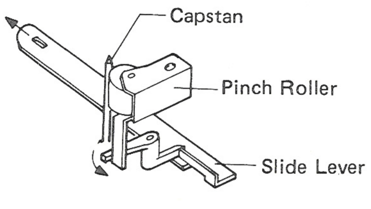


Fig. 12

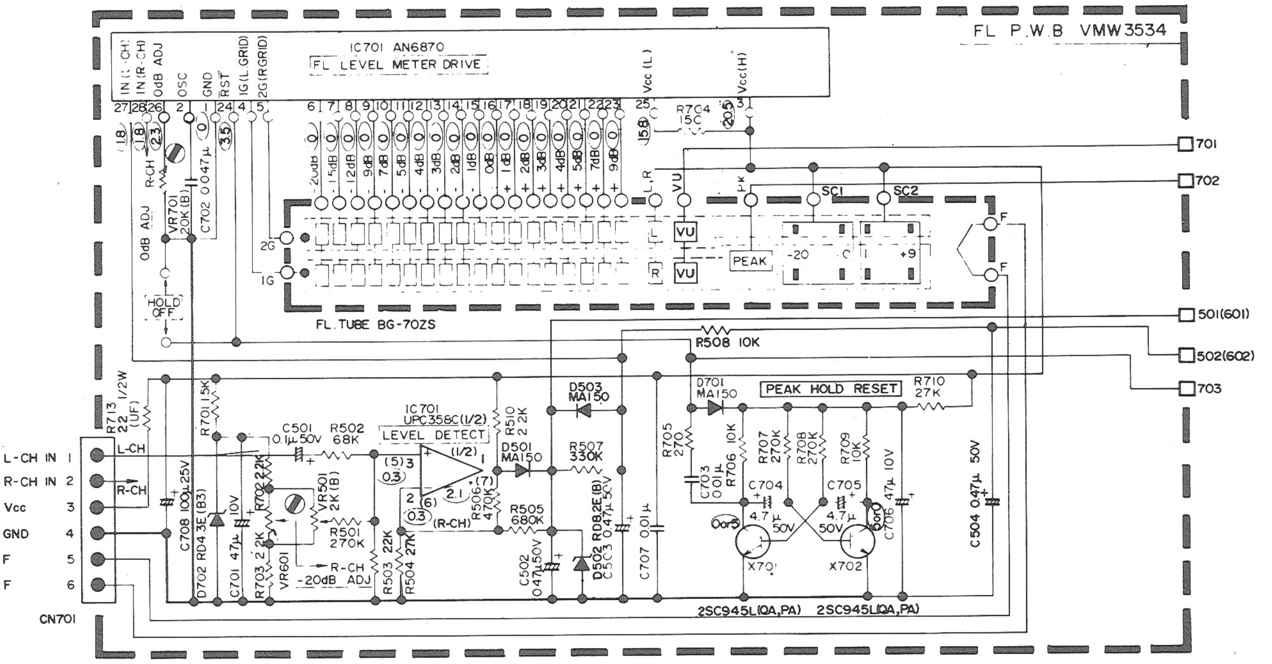
■ FL level meter circuit

This meter circuit employs the time sharing system in which the level indication is switched from the Rch to the Lch according to the time. This system is called the duplex system or the dynamic drive system.
C702 in the diagram below has the time constant to determine the oscillation frequency of the oscillator for time sharing and oscillates at about 400 Hz.
The input signals (+1.9V − +6.6V) both of which are made into DC at Pins 27 (Lch) and 28 (Rch) are applied to the IC. IC702, the AC-DC converter circuit, rectifies the audio signal input and produces a DC voltage in proportion to the input level.

- Attack time (When applying a signal equivalent to a signal of 5kHz, 0 dB)
  10msec refers to 0 to -1dB.
  3msec refers to -1 to -5dB.
- Recovery time (When removing a signal equivalent to a signal of 5kHz, 0dB)
  300 ± 100msec until the indication of -6dB.

This circuit has the function to peak-hold all indication points except the three points (-20, -15 and -12dB).
This circuit is automatically reset at regular intervals of 2 sec.
X701 and X702 in the diagram below form the astable multivibrator which generates the reset signal.

Schematic Diagram of FL Level Meter



FL P.W.B VMW3534
IC701 AN6870
FL LEVEL METER DRIVE
IN(L-CH)
IN(R-CH)
0dB ADJ
OSC
GND
RST
1G(L GRID)
2G(R GRID)
Vcc(L)
Vcc(H)
27 28 26 2 1 24 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 25 3
1.8
1.8
2.3
0
3.5
15.8
20.5
R704 15C
-20dB
-15dB
-12dB
-9dB
-7dB
-5dB
-4dB
-3dB
-2dB
-1dB
0dB
+1dB
+2dB
+3dB
+4dB
+5dB
+7dB
+9dB
L,R
VU
PK
SC1
SC2
R-CH
VR701 20K(B)
C702 0.047µ
0dB ADJ
HOLD OFF
2G
1G
L
R
VU
VU
PEAK
-20
0
+9
F
F
FL.TUBE BG-70ZS
701
702
501(601)
502(602)
703
R508 10K
R713 22 1/2W (UF)
R701 1.5K
C501 0.1µ 50V
R502 68K
IC701 UPC358C(1/2)
LEVEL DETECT
(1/2)
(5) 3
0.3
2 (6)
0.3
2.1
(7) 1
(R-CH)
R510 2.2K
D501 MA150
D503 MA150
R507 330K
R506 470K
R505 680K
L-CH
R-CH
L-CH IN 1
R-CH IN 2
Vcc 3
GND 4
F 5
F 6
CN701
C708 100µ 25V
D702 RD4.3E(B3)
C701 47µ 10V
R702 2.2K
R703 2.2K
VR601
VR501 2K(B)
R501 270K
R-CH
-20dB ADJ
R503 22K
R504 27K
C502 0.47µ 50V
D502 RD8.2E(B)
C503 0.47µ 50V
C707 0.01µ
D701 MA150
PEAK HOLD RESET
R710 27K
R705 270
C703 0.01µ
R706 10K
R707 270K
R708 270K
R709 10K
C704 4.7µ 50V
C705 4.7µ 50V
0or5
5or0
C706 47µ 10V
C504 0.47µ 50V
X701
X702
2SC945L(QA,PA)
2SC945L(QA,PA)

Fig. 13

Removal of the Main Parts

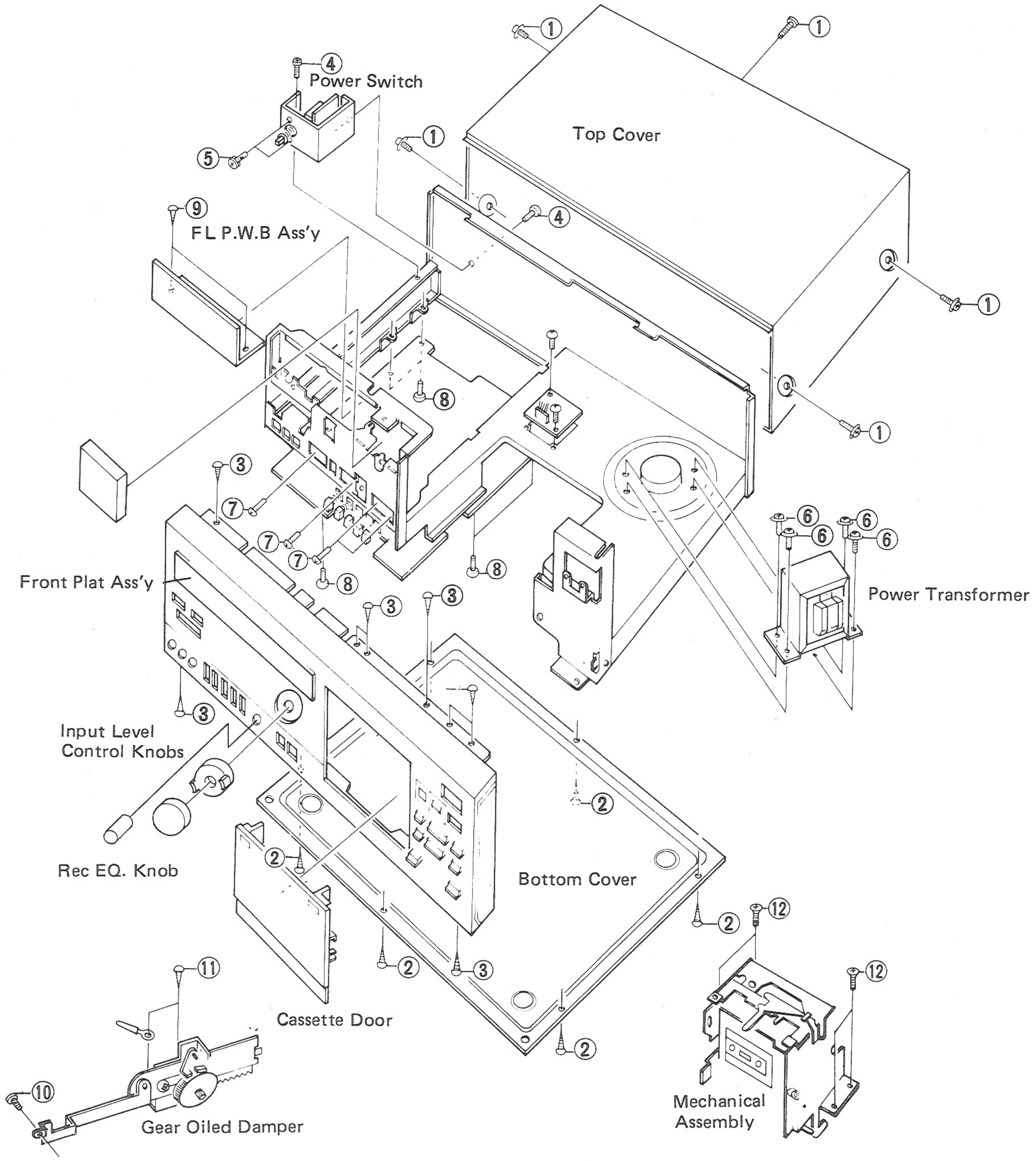

Power Switch
Top Cover
FL P.W.B Ass'y
Front Plat Ass'y
Power Transformer
Input Level Control Knobs
Rec EQ. Knob
Bottom Cover
Cassette Door
Gear Oiled Damper
Mechanical Assembly
①
②
③
④
⑤
⑥
⑦
⑧
⑨
⑩
⑪
⑫

Fig. 14

Observe car in handing the parts since the parts are small in size and the distance between them are short due to a deck design aimed mainly at compactness and high performance.

Enclosure assembly parts

1. Cassette door
   To open the cassette door, push on the eject button. Slide off the cassette door upwards (about 5 mm) to unlock its pawls of both sides.
   Remove the cassette door forward.
2. Control knobs
   INPUT control knobs } Pull off them forward.
   REC. EQ knob
3. Top cover
   Remove 5 screws ① fastening the top cover.
4. Bottom cover
   Remove 8 screws ② fastening the bottom cover.
5. Front plate assembly
   1) Remove 6 screws ③ fastening the front plate (upper side)

—enclosed 3 screws for Mechanical ass'y—

2) Remove 2 screws ③ fastening the front plate (bottom side)
3) Remove the wire socket for operation buttons wires on the mechanical control P.W. Board.
4) Remove the wire socket for quarz lock indicator (LED) on the quarz lock P.W. Board.
5) Remove earch wire clamper, and Remove the front plate ass'y to forward.

Electrical Parts

1. Power switch
   Remove 2 screws ④ fastening the switch bracket.
   Remove 2 screws ⑤ fastening the power switch.
2. Power transformer
   Remove 4 screws ⑥ fastening the power transformer.
3. Amp. P.W.B. assembly
   Remove 4 screws ⑦ fastening the switch.
   Remove 5 screws ⑧ fastening the amp. P.W.B. ass'y
4. FL P.W.B. assembly
   Remove a connector on the FL. P.W. Board, and Remove 2 screws ⑨ .
   Remove the FL P.W.B ass'y forward.

Mechanical assembly

1. Remove the bottom cover, and remove the heads wires from 2 wire clamps.
2. Remove a screw ⑩ fastening the arm of gear-oiled damper. (Left side of cassette holder.)
   To remove the door brake relation parts, remove 2 screws ⑪ fastening the gear frame ass'y.
3. Remove 4 screws ⑫ fastening the mecha. bracket to amp. chassis. (left and right ..... 2 screws on each)

Mechanical parts

1. Supply reel disc
   Pull out the reel disc stopper ⑬ . (when assembling the reel disc, the stopper use a new parts — the stopper cannot use again —)
2. Reel motor
   1) Remove 3 screws ⑭ fastening the reel motor.
   2) Remove a screw fastening the shift arm.
3. Take up reel disc
   Pull out the reel disc stopper ⑮ .
4. Erase head
   Remove a screw ⑯ .
   Remove a screw ⑰ for adjustment
5. REC and PB head
   Remove a screw ⑱ .
   Remove a screw ⑲ for adjustment.
6. Pinch roller arm assembly
   Remove an E-ring ⑳ .
7. Capstan motor assembly
   1) Remove a screw ㉑ fastening the mecha. control P.W.B. assembly, and remove its assembly.
   2) Remove a screw ㉒ fastening the earth wire. (with the shield bracket removed)
   3) Remove 4 screws ㉓ fastening the solenoid.
   4) Remove 4 screws ㉔ fastening the capstan motor assembly.

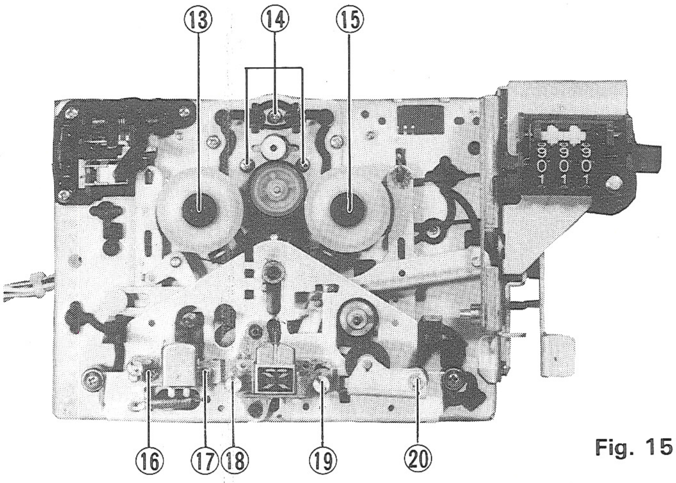


Fig. 15

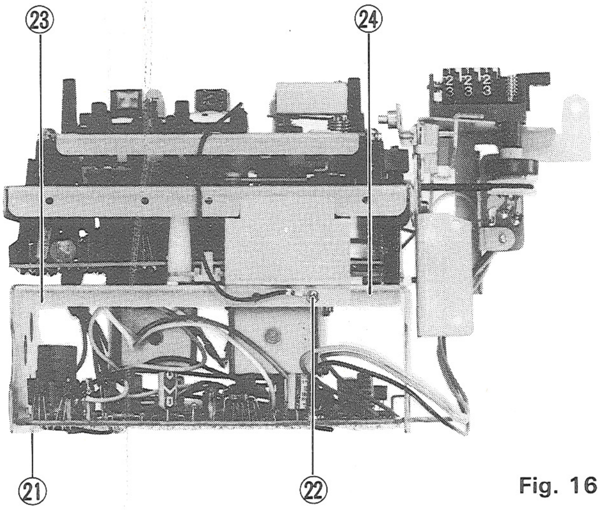


Fig. 16

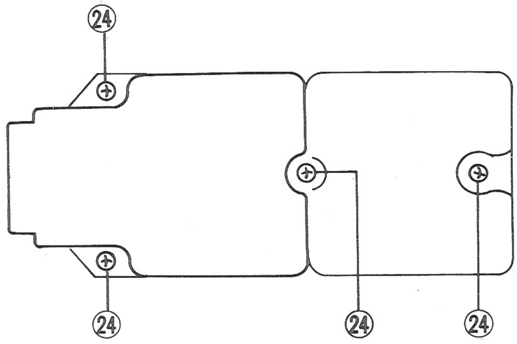


Fig. 17

Block Diagram

Main Amplifier Circuit

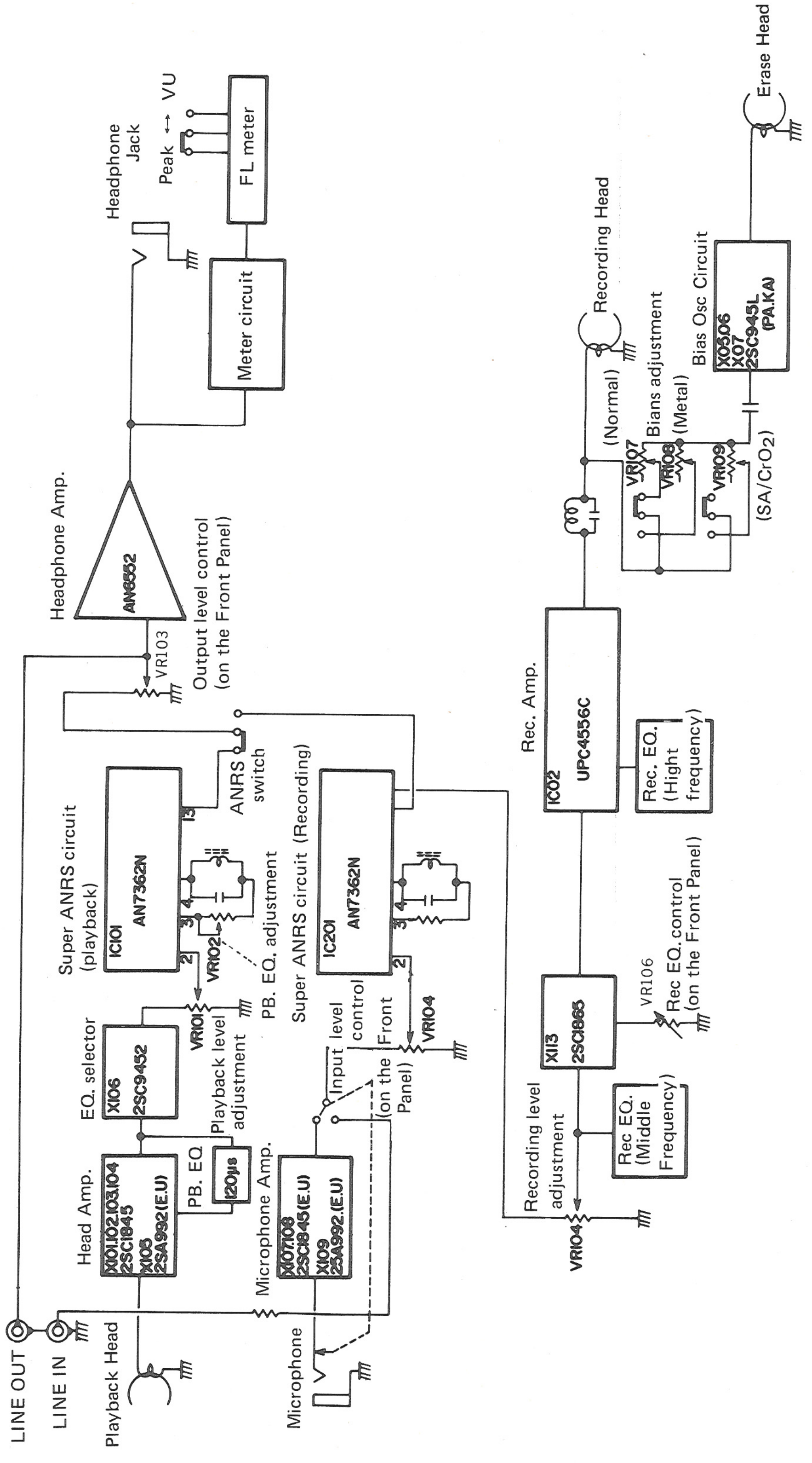

LINE OUT
LINE IN
Playback Head
Microphone
Head Amp.
X101,102,103,104
2SC1845
X105
2SA992(E,U)
PB. EQ
120µs
EQ. selector
X106
2SC9452
Playback level adjustment
VR101
Super ANRS circuit (playback)
IC101
AN7362N
2
3
4
13
VR102
PB. EQ. adjustment
ANRS switch
VR103
Output level control (on the Front Panel)
Headphone Amp.
AN6552
Meter circuit
FL meter
Headphone Jack
Peak ↔ VU
Microphone Amp.
X107,108
2SC1845(E,U)
X109
2SA992(E,U)
Input level control (on the Front Panel)
VR104
Super ANRS circuit (Recording)
IC201
AN7362N
2
3
4
Recording level adjustment
VR104
Rec EQ. (Middle Frequency)
X113
2SC1865
VR106
Rec EQ. control (on the Front Panel)
Rec. Amp.
IC02
UPC4556C
Rec. EQ. (Hight frequency)
Recording Head
(Normal)
VR107
Bians adjustment
VR108
(Metal)
VR109
(SA/CrO2)
Bias Osc Circuit
X05,06
X07
2SC945L
(PA,KA)
Erase Head

Fig. 18

Mecha. Control Circuit

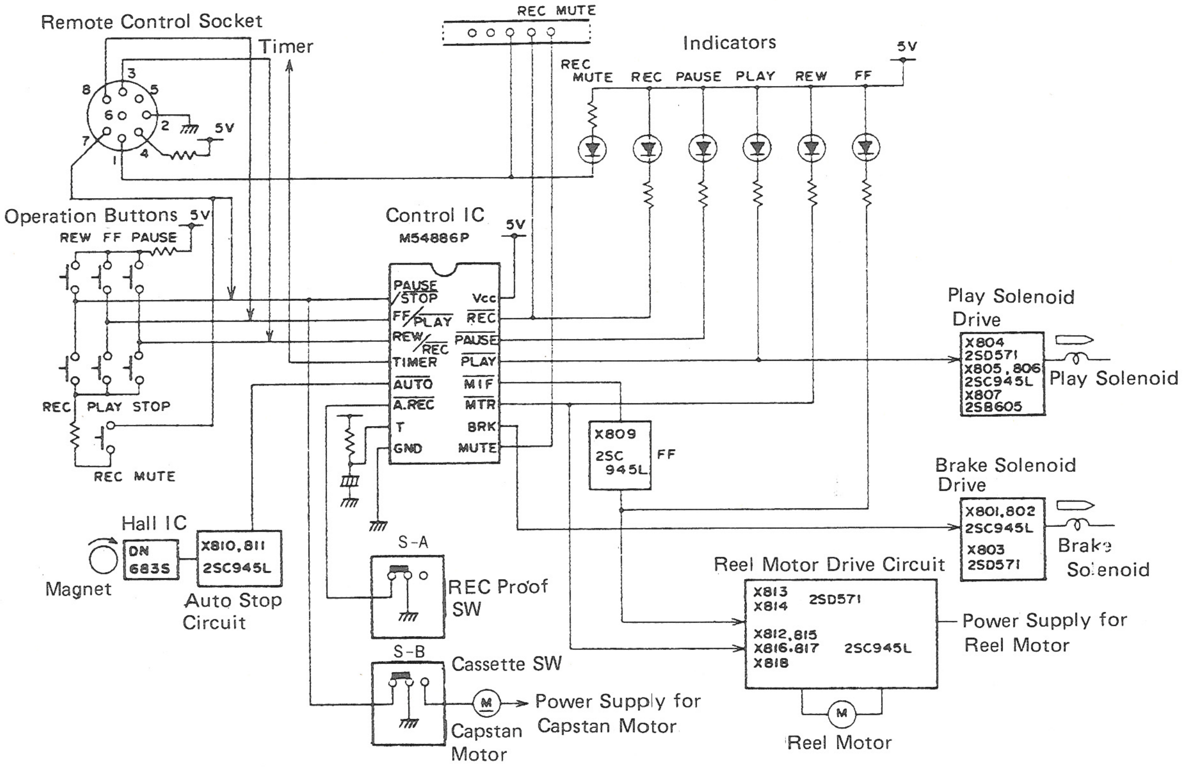

Remote Control Socket
Timer
REC MUTE
Indicators
5V
REC MUTE
REC
PAUSE
PLAY
REW
FF
8
3
5
6
2
7
1
4
Operation Buttons
REW FF PAUSE
REC PLAY STOP
REC MUTE
Control IC
M54886P
PAUSE/STOP
FF/PLAY
REW/REC
TIMER
AUTO
A.REC
T
GND
Vcc
REC
PAUSE
PLAY
MIF
MTR
BRK
MUTE
X809
2SC 945L
FF
Play Solenoid Drive
X804
2SD571
X805,806
2SC945L
X807
2SB605
Play Solenoid
Brake Solenoid Drive
X801,802
2SC945L
X803
2SD571
Brake Solenoid
Reel Motor Drive Circuit
X813
X814
2SD571
X812,815
X816,817
X818
2SC945L
Power Supply for Reel Motor
M
Reel Motor
Hall IC
DN 6835
X810,811
2SC945L
Auto Stop Circuit
Magnet
S-A
REC Proof SW
S-B
Cassette SW
M
Power Supply for Capstan Motor
Capstan Motor

Fig. 19

Maintenance

To get long, trouble-free service, maintenance is important. Do not forget cleaning and demagnetizing.

Cleaning

After long use, the heads and tape part — capstan, pinch roller, etc. — will become dirty with dust or magnetic particles. Dirty heads cause imperfect erasing or high frequency drop-off. A dirty capstan and pinch roller will cause unstable tape speed, leading to increased wow and flutter. Always keep them clean by following the procedure below.

1. Heads.

1) Push Eject button to open the cassette holder.
2) Use the head cleaning stick-provided to wipe the surface where the tape comes into contact with the head.
(It is effective to moisten the cotton with alcohol.)

2. Pinch roller and capstan

Do the same method as heads.

3. Cabinet

When the cabinet becomes dirty, wipe it with a soft cloth soaked with a neutral cleaning solution of a polishing cloth.

* Do not use thinner or benzine.

Demagnetizing

The heads are made from a material resistant to magnetization, but after long use they may become magnetized.
A magnet brought into their vicinity can magnetize the heads, causing excess noise. If noise seems to have increased, demagnetize the heads with a head demagnetizer through the following procedure.

1. Turn the POWER switch OFF.
2. Wrap the tip of the demagnetizer with vinyl tape or soft cloth so as not to damage the head surface. Switch on the demagnetizer and bring it close to the head.
3. Move the tip of the demagnetizer slowly first to the left and right, then up and down in front of the head. Gradually move it away from the head and switch it off at a distance of more than 30 cm (12").
4. The erase head need not be demagnetized. The capstan shaft and tape guide should be demagnetized in the same way as the record/playback head.

* Do not bring a magnetized metallic object (a screwdriver, for example) near the head as this will incrase noise.

Main Adjustments

[I] Equipment and measuring instruments used for adjustment

1. Electrical adjustment

1) Electronic voltmeter
2) Audio frequency oscillator
   (range: 50—20kHz and output 0dB with impedance 600Ω)
3) Attenuator
4) Standard tapes for REC/PB
   Maxell UD—SF tape
   TDK SA—SA tape
   SCOTCH METAFINE—Metal tape } or equivalent
5) Reference tape for playback (JVC Test Tape)
   VTT-658 (for head azimuth adj.)
   VTT-656A-S (for motor speed, wow flutter adj.)
   VTT-664 (for Reference Level 1kHz)
   VTT-675N (for playback frequency response)
6) Resistor
   600Ω (for attenuator matching)

2. Mechanical adjustment

1) Torque testing cassette gauge
2) Blank tape (C-120) for tape running checker.

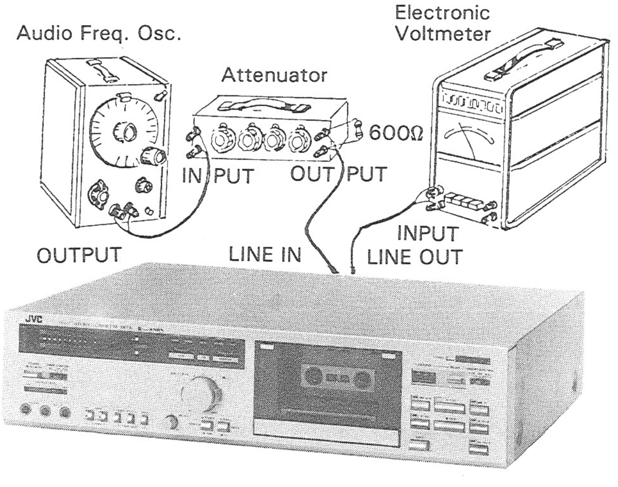

Audio Freq. Osc.
Attenuator
Electronic Voltmeter
600Ω
IN PUT
OUT PUT
OUTPUT
LINE IN
INPUT
LINE OUT
JVC
DD-7

Fig. 20

[II] Mechanical adjustment (Adjust the mechanism or confirm that it is in normal operating condition prior to the adjustment of the electrical circuit.)

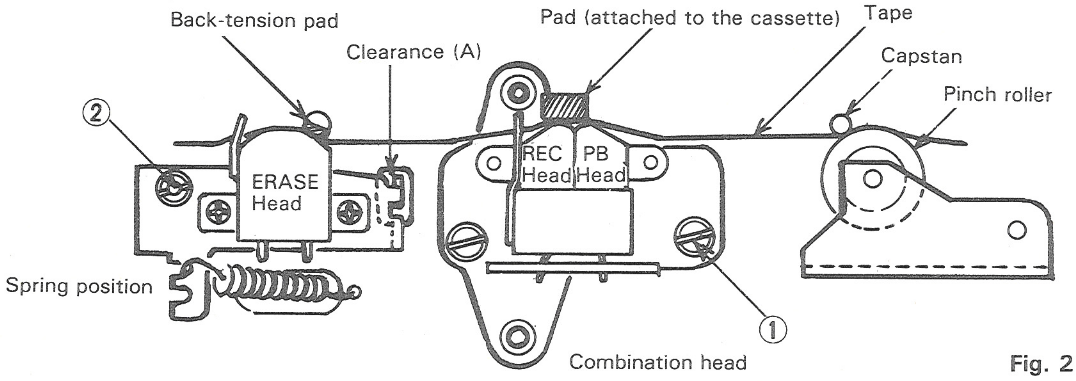
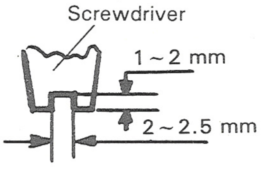

Back-tension pad
Clearance (A)
Pad (attached to the cassette)
Tape
Capstan
Pinch roller
②
ERASE Head
REC Head
PB Head
Spring position
①
Combination head

Fig. 21

1. After installing the specified parts in the appropriate positions:
   A. Snug screw ① gently, then back off about two turns. This makes the heads nearly horizontal.
   B. Snug screw ② gently, then back off about one turn. This will roughly position the tape in the center of the tape path.
   For tightening screw ②, use a home make screwdriver, filed down to the specifications shown below. The same screwdriver can be used to tighten screw (1).
2. Make sure that the moving part of the erase head assembly moves smoothly around the pivot of screw ② and also confirm that there is enough clearance (A) in the play mode.
3. Next, make an operational adjustment. Load a C-120 cassette and adjust the height of the erase head by turning screw ②. Watching that the tape does not curl at the guides of both the combination and erase heads is indication of proper adjustment.

Notes:
1) After adjustment, confirm by ear that recorded sounds on the metal tape are completely erased.
2) After replacement of the erase or record/playback head, slacken the associated wire, clamp the new head, then confirm that this new head performs normal operation.

4. The head azimuth and pressure adjustments are made by using screws (3) and (4). Since the heads were already subject to these adjustments unit by unit, they should be made only when the tape does not travel due to the record/playback head section.


Screwdriver
1～2 mm
2～2.5 mm

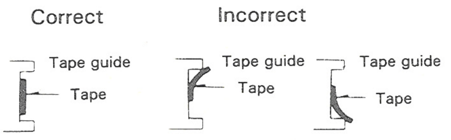
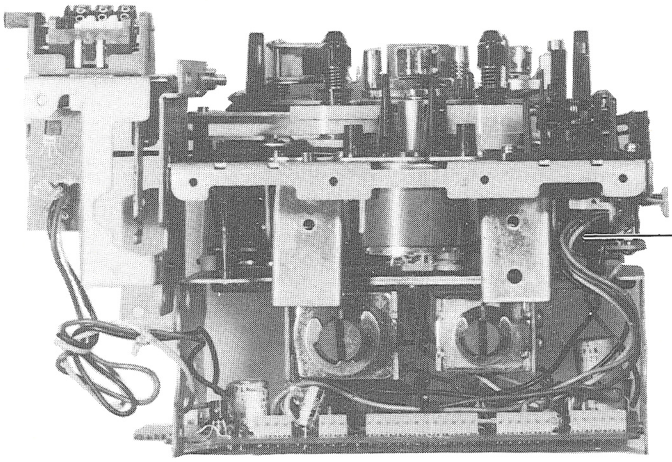

Correct
Incorrect
Tape guide
Tape
Tape guide
Tape
Tape guide
Tape

Fig. 22

Item	Adjustment	Adjusting point	Standard value	Remarks
Checking play-back torque	Employ a torque testing cassette tape for the checking.		40–70 gr-cm	
Checking fast forward torque	Measure the torque in the fast forward mode in the same manner as in the above.		More than 80 gr-cm	If the standard torque is not obtained, clean the motor pulley, idler disc circumference.
Checking rewind torque	Measure the torque in the rewind mode in the same manner as in the above.		More than 80 gr-cm	
Checking wow and flutter	Connect a wow and flutter meter to the LINE OUT terminals. Play back the VTT-656A-S test tape. Check to see if the reading of the meter is within 0.021% (WRMS).			

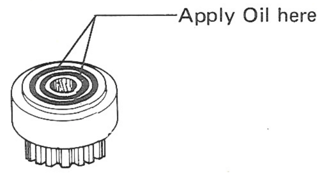


This semi-fixed resistor is no adjustment.

Fig. 23

Damping gear oil

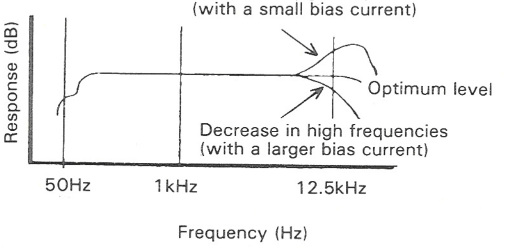
Oil employed — Torque gease specified by JVC (KANTO KASEI GP-608V)
Applying method — Apply in both concaved sections as shown in the figure.

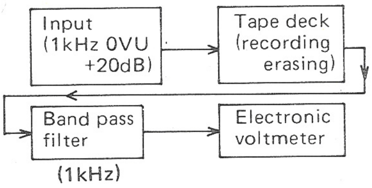


[III] Electrical circuit adjustment procedure

In the steps marked by an asterisk (*), adjustment should be performed, however, only checking is sufficient with steps other than those.
Adjustment should be performed in the order of steps 1,2,3 .....
Perform these adjustments with the ANRS switch set to OFF and with the OUTPUT level control set max.
The DD-7 employs a combination record/playback head, thus permitting monitoring the sound being recorded. For adjustment, playback of the recorded sounds is therefore possible simply by switching the MONITOR switch from SOURCE to TAPE. (It is unnecessary to rewind the tape.)

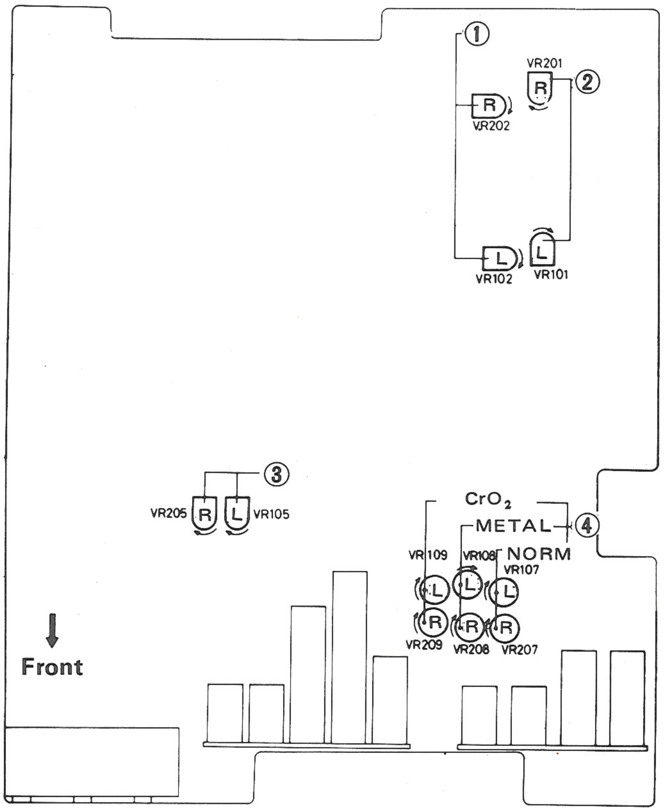
Step	Item	Adjustment	Adjusting point	Standard value	Remarks
1*	Adjusting playack level	1. Play back the VTT-664 Reference tape (1kHz) with the tape select switch set to the SF/NORM position. 2. Adjust VR101 and VR201 until the LINE OUT becomes about −4dBs.	VR101 201	−4 dBs	This adjustment becomes necessary when a change in playback level results (for example, due to head replacement).
2*	Playback frequency response	Playback test tape VTT-675N (1kHz, 10kHz) for following adjustment. 1) Adjust VR102 and VR202 so that 10kHz signal and 1kHz signal gains become flat response.	VR102 202	Reference frequency; 1kHz 0 ± 2dB at 10kHz	
3*	Adjusting Fluorescent tube indicator sensitivity	1) Set the METER switch to VU. 2) Set the MONITOR switch to SOURCE, then apply a 1kHz signal of around −20dB to the Rch and Lch of the LINE IN terminals. 3) Adjust the INPUT LEVEL control so that the output level at the LINE OUT terminals is −4dB. 4) Adjust VR701 ("0"dB level adjustment) so that "0"dB lights at both R and L. At this time, "0"dB must go out at both R and L with the input ATT (attenuation) level lowered by 0.5dB. 5) Lower the input ATT level by 20dB. 6) Adjust VR501 (Lch) and VR601 (Rch) so that "−20"dB lights at both R and L. At this time, "−20"dB must go out at both R and L with the input ATT level lowered by 1dB. 7) Repeat steps 4) − 6).	VR701 VR501 601	0 VU −20VU	Perform the adjustment when the parts are replaced.
4*	Checking record/ playback frequency response	Record 1kHz, 50Hz and 12.5kHz signals at an input level of 0 VU to −20dB. Play back the tape. Check the see that the 50Hz and 12.5kHz signal output deviations fall within the standard range, using the 1kHz signal output as a reference.	For SF/ NORM tape; VR107, 207 For SA/ CrO_2 tape; VR109, 209 For Metal tape; VR108, 208	Reference frequency; 1kHz 0 ± 3dB at 50Hz 0 ± 3dB at 12.5kHz	This checking should be performed for normal, chrome and metal tapes and for both right and left channels. 1. Bias current adjustment for a cassette deck should generally be performed referring to the record/playback frequency response. This is because the frequency response of a cassette deck depends more greatly upon the bias current than does that of an open reel deck. The current measuring method described below is an alternative one. 2. If the bias current is not properly adjusted, the record and playback characteristics become as shown left.



Step	Item	Adjustment	Adjusting point	Standard value	Remarks
5	Adjusting recording level	1. Apply a 1kHz, approx. −10dB signal to the LINE IN terminals. Adjust the recording level controls until the signal is available at −4dBs at the LINE OUT terminals. 2. After checking to see if the FL indicator become 0, record the signal applied to both left and right channels using normal tape. 3. Play back the recording part. Perform the recording signal adjustment with VR105 and VR205 so that the FL indicator becomes 0.	VR106, VR106,	0 VU	The level difference between left and right channels for SF/NORM tape, chrome tape and metal tape should be less than 1dB (1 VU). Perform the adjustment using a normal tape, level difference between recording and playback for SA/CrO_2 and metal tapes, should be less than 1.5dB, and right channels should also be less than 1dB.
6	Checking record/ playback signal distortion	1. Record a 1kHz, −4dBs signal to LINE IN terminals and perform recording with the FL indicator becomes 0. 2. Play back the recorded part. Check the output with a distortion meter to see if the value conforms to the standard value.		SF/NORM tape; Less than 2.5% SA/CrO_2 tape; Less than 3% METAL tape; Less than; 2%	Be sure to perform this adjustment following bias current and recording level adjustment
7	Checking signal to noise ratio in recording/ playback	1. Record a 1kHz, 0 VU signal. Stop the input by disconnecting from the terminal to perform non-signal recording. 2. Play back the recorded part. Measure the 0 VU recording output and the non-signal recording output for comparison using an electronic voltmeter. Check to see if the value conforms to the standard value.		SF/NORM, SA/CrO_2 and Metal tapes; More than 42dB	Apply an output (−72dBs) to the MIC terminals with the recording level controls set to maximum so that the FL indicator becomes to 0.
8	Checking erasing coefficient	1. Apply a 1kHz signal to the LINE IN terminals. Adjust the recording level controls until the FL indicator becomes 0. 2. Perform recording with the signal enhanced by 20dB. 3. Erase a part of the recording. 4. Measure the output difference between the erased part and non-erased part to compare with an electronic voltmeter.		More than 65dB	For the measuring, connect a band pass filter between the deck and the electronic voltmeter.  Input (1kHz 0VU +20dB) Tape deck (recording erasing) Band pass filter (1kHz) Electronic voltmeter

[IV] Adjustment Location of Electrical Circuit

Main Amp. P.W. Board (Parts Ass'y Side View)


①
VR201
R
②
R
VR202
L
L
VR102
VR101
③
VR205
R
L
VR105
CrO₂
METAL
④
NORM
VR109
VR108
VR107
L
L
L
R
R
R
VR209
VR208
VR207
Front

FL P.W. Board (Parts Ass'y Side View)

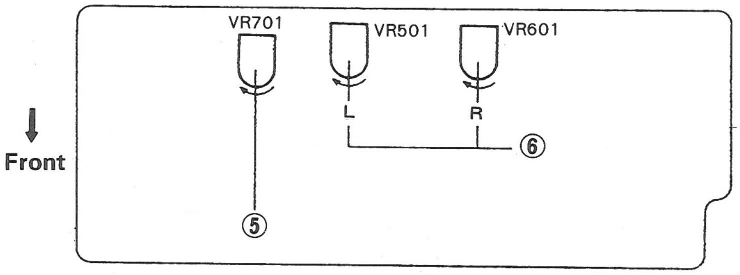

VR701
VR501
VR601
L
R
⑥
⑤
Front

Fig. 24

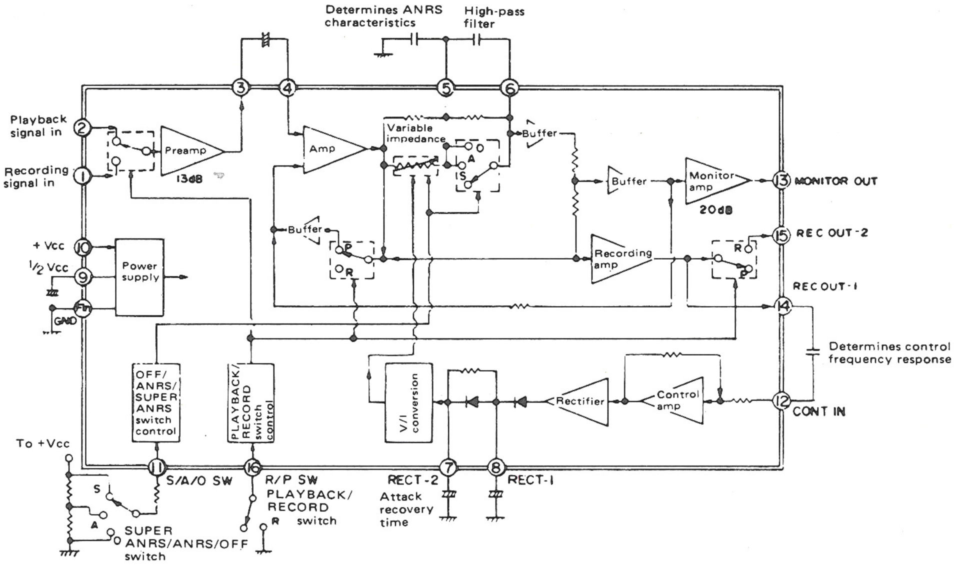
① For playback frequency response adjustment (Turning in the direction of the arrow increases the signal current.)
② For playback level adjustment (Turning in the direction of the arrow increases the playback levels.]
③ For recording level adjustment (Turning in the direction of the arrow increases the recording levels.)
④ For bias current adjustment (Turning in the direction of the arrow increases the bias current value.)
⑤ For FL 0dB level Adjustment
⑥ For FL −20dB level adjustment } (Tuning in the direction of the arrow increases the levels)

Instruction of ICs

IC-101, 201 ANRS, Super ANRS

AN7362N

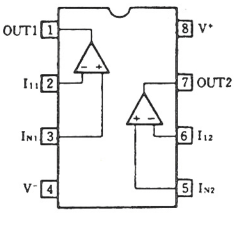
Block Diagram


Determines ANRS characteristics
High-pass filter
Playback signal in
Recording signal in
Preamp
13dB
Amp
Variable impedance
Buffer
Monitor amp
20dB
MONITOR OUT
REC OUT-2
REC OUT-1
Recording amp
+Vcc
1/2 Vcc
Power supply
GND
OFF/ANRS/SUPER ANRS switch control
PLAYBACK/RECORD switch control
V/I conversion
Rectifier
Control amp
Determines control frequency response
CONT IN
To +Vcc
S/A/O SW
R/P SW
PLAYBACK/RECORD switch
SUPER ANRS/ANRS/OFF switch
RECT-2
Attack recovery time
RECT-1

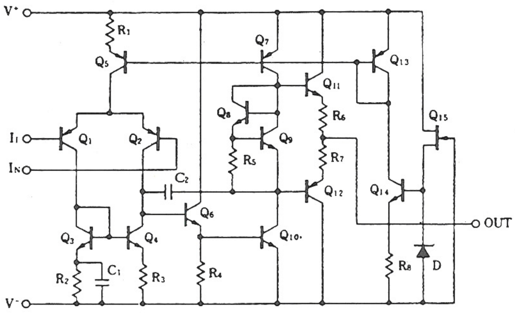
IC901 Headphone & Indicator Amp

UPC4557C

(Top View)


OUT1 1
I₁₁ 2
I_N1 3
V⁻ 4
8 V⁺
7 OUT2
6 I₁₂
5 I_N2

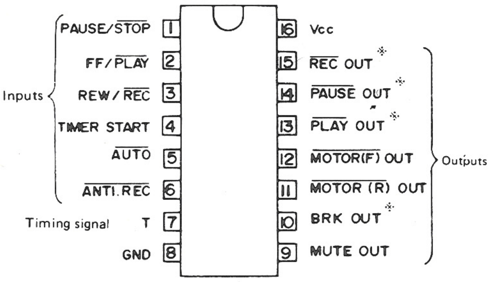
Equivalent Circuit (1/2)


V⁺
V⁻
I₁
I_N
OUT
R₁
R₂
R₃
R₄
R₅
R₆
R₇
R₈
C₁
C₂
D
Q₁
Q₂
Q₃
Q₄
Q₅
Q₆
Q₇
Q₈
Q₉
Q₁₀
Q₁₁
Q₁₂
Q₁₃
Q₁₄
Q₁₅

IC801 Mecha. Control

M54886P

(Top View)


Inputs
PAUSE/STOP 1
FF/PLAY 2
REW/REC 3
TIMER START 4
AUTO 5
ANTI.REC 6
Timing signal T 7
GND 8
16 Vcc
15 REC OUT *
14 PAUSE OUT *
13 PLAY OUT *
12 MOTOR(F) OUT
11 MOTOR (R) OUT
10 BRK OUT *
9 MUTE OUT
Outputs

* : Open-collector output

Block Diagram

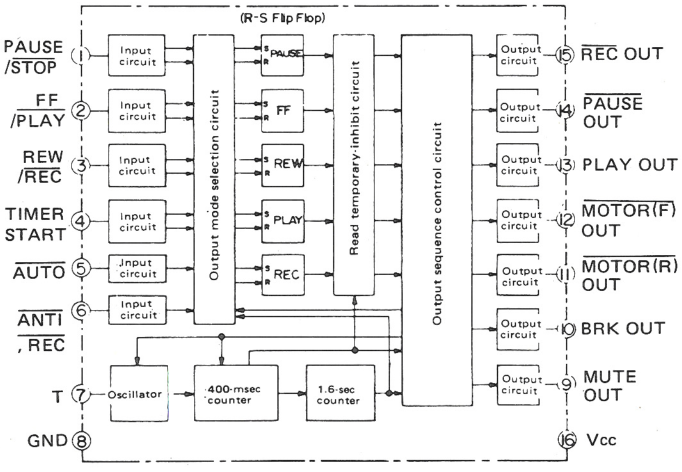
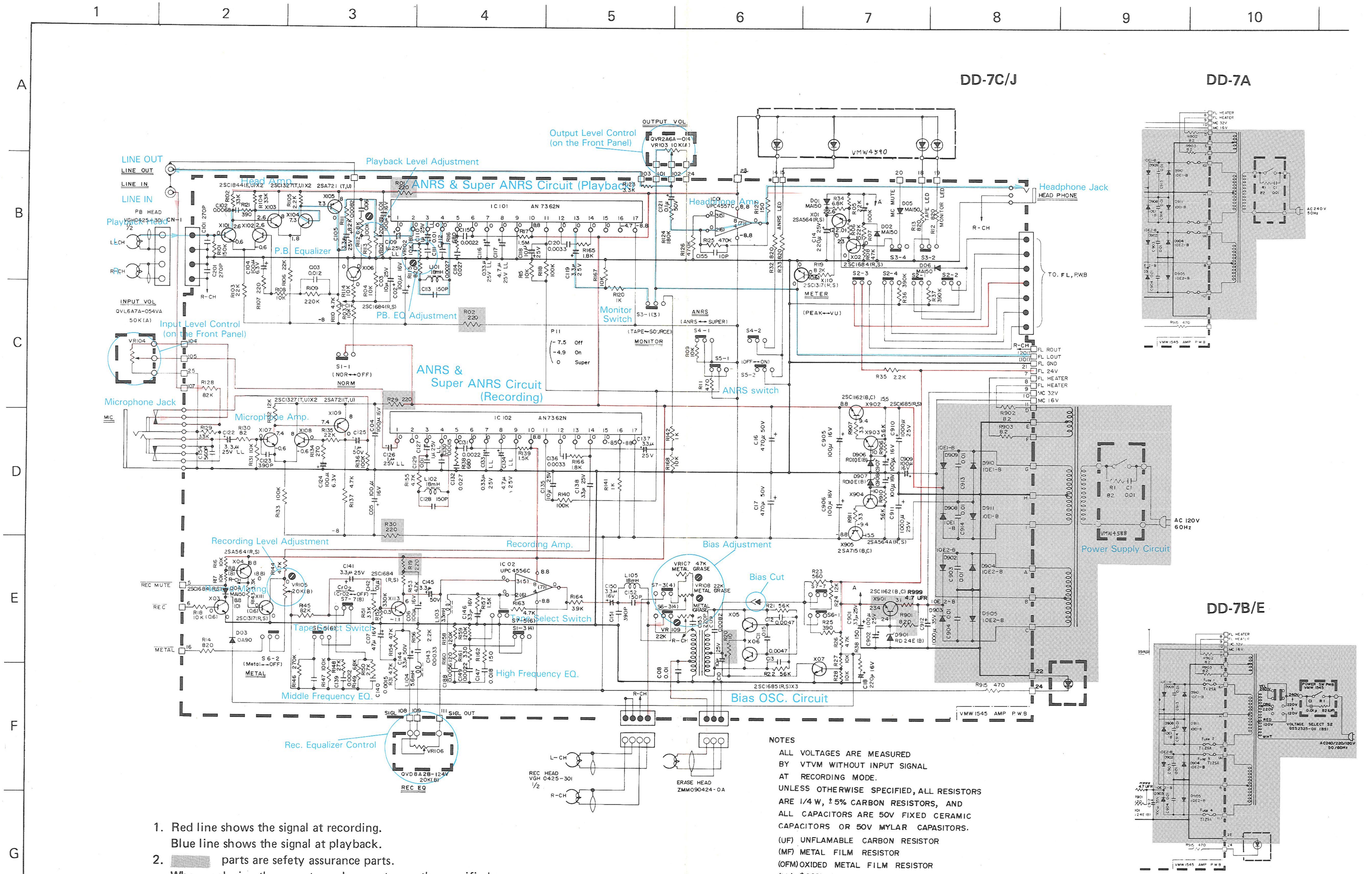

(R-S Flip Flop)
PAUSE/STOP 1
FF/PLAY 2
REW/REC 3
TIMER START 4
AUTO 5
ANTI, REC 6
T 7
GND 8
Input circuit
Output mode selection circuit
PAUSE
FF
REW
PLAY
REC
Read temporary-inhibit circuit
Output sequence control circuit
Output circuit
Oscillator
400-msec counter
1.6-sec counter
15 REC OUT
14 PAUSE OUT
13 PLAY OUT
12 MOTOR(F) OUT
11 MOTOR(R) OUT
10 BRK OUT
9 MUTE OUT
16 Vcc

Fig. 25

— Continued to page 23 —

Standard Schematic Diagram of DD-7 (Amplifier Circuit)


1
2
3
4
5
6
7
8
9
10
A
B
C
D
E
F
G
DD-7C/J
DD-7A
DD-7B/E
LINE OUT
LINE IN
Playback Head
Input Level Control
(on the Front Panel)
Microphone Jack
Head Amp.
P.B. Equalizer
Playback Level Adjustment
PB. EQ Adjustment
ANRS & Super ANRS Circuit (Playback)
Output Level Control
(on the Front Panel)
Headphone Amp.
Headphone Jack
Monitor Switch
ANRS &
Super ANRS Circuit
(Recording)
ANRS switch
Microphone Amp.
IC 101 AN 7362N
IC 102 AN7362N
IC 02 UPC 4556C
Recording Level Adjustment
Recording Amp.
Bias Adjustment
Bias Cut
Tape Select Switch
Middle Frequency EQ.
High Frequency EQ.
Bias OSC. Circuit
Rec. Equalizer Control
Power Supply Circuit
TO. F L, P.W.B
VMW 4590
VMW 4588
VMW 1545 AMP P W B
AC 120V 60Hz
REC HEAD VGH 0425-301
ERASE HEAD ZMM090424-0A
METER
(PEAK↔VU)

1. Red line shows the signal at recording.
   Blue line shows the signal at playback.
2. ▨ parts are sefety assurance parts.
   When replacing those parts, make sure to use the specified one.

NOTES

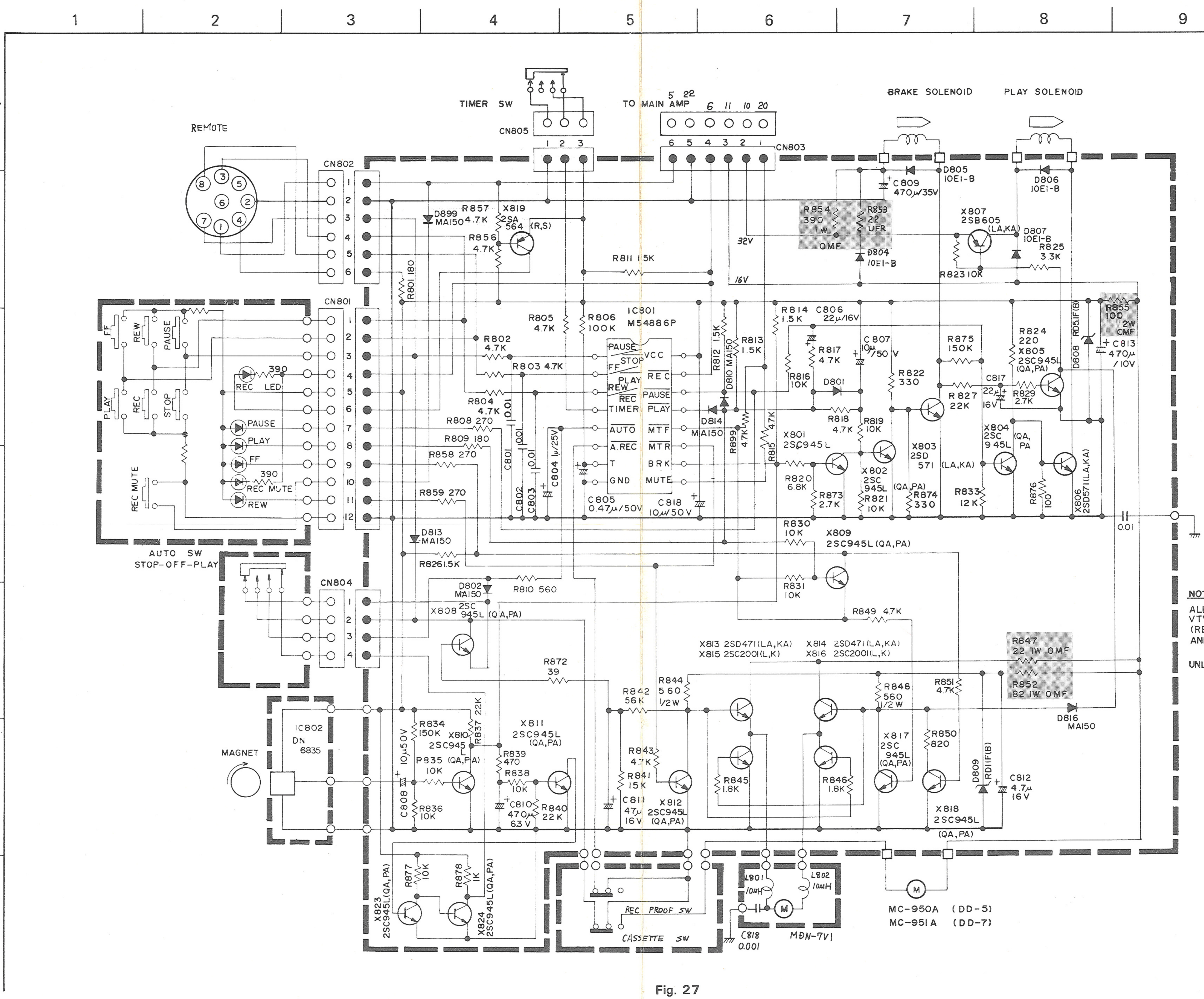
ALL VOLTAGES ARE MEASURED BY VTVM WITHOUT INPUT SIGNAL AT RECORDING MODE.

UNLESS OTHERWISE SPECIFIED, ALL RESISTORS ARE 1/4 W, ±5% CARBON RESISTORS, AND ALL CAPACITORS ARE 50V FIXED CERAMIC CAPACITORS OR 50V MYLAR CAPASITORS.

(UF) UNFLAMABLE CARBON RESISTOR
(MF) METAL FILM RESISTOR
(OFM) OXIDED METAL FILM RESISTOR
(LL) ±20% LOW LEAK CURRENT ELECTROLYTIC CAPACITOR
(PP) POLYPROPYLENE CAPACITOR
(MM) METALIZED MYLAR CAPACITOR

Fig. 26

Standard Schematic Diagram of DD-7 (Mecha. Control Circuit)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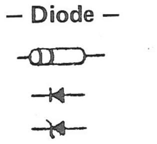
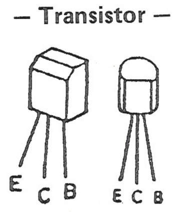
REMOTE
CN802
TIMER SW
CN805
TO MAIN AMP
CN803
BRAKE SOLENOID
PLAY SOLENOID
D805 10E1-B
C809 470μ/35V
D806 10E1-B
R854 390 1W OMF
R853 22 UFR
D804 10E1-B
X807 2SB605 (LA,KA)
D807 10E1-B
R825 3.3K
R823 10K
32V
16V
D899 MA150
R857 4.7K
X819 2SA564 (R,S)
R856 4.7K
R811 15K
R801 180
CN801
FF
REW
PAUSE
PLAY
REC
STOP
REC MUTE
REC LED
390
AUTO SW STOP-OFF-PLAY
R805 4.7K
R806 100K
IC801 M54886P
R802 4.7K
R803 4.7K
R804 4.7K
R808 270
R809 180
R858 270
R859 270
C801 0.01
C802
C803 0.01
C804 1μ/25V
C805 0.47μ/50V
C818 10μ/50V
PAUSE
STOP
VCC
FF
REW
REC
PLAY
TIMER
AUTO
A.REC
T
GND
MTF
MTR
BRK
MUTE
R812 1.5K
D810 MA150
R813 1.5K
D814 MA150
R899 4.7K
R815 4.7K
R814 1.5K
C806 22μ/16V
R817 4.7K
C807 10μ/50V
R816 10K
D801
R822 330
R818 4.7K
R819 10K
X801 2SC945L
X802 2SC945L (QA,PA)
R820 6.8K
R873 2.7K
R821 10K
R874 330
X803 2SD571 (LA,KA)
R875 150K
R827 22K
C817 22μ 16V
R829 2.7K
R824 220
X805 2SC945L (QA,PA)
D808 RD5.1F(B)
R855 100 2W OMF
C813 470μ/10V
X804 2SC945L (QA,PA)
R833 12K
R876 100
X806 2SD571(LA,KA)
0.01
R830 10K
X809 2SC945L (QA,PA)
R831 10K
R849 47K
D813 MA150
R826 1.5K
CN804
D802 MA150
R810 560
X808 2SC945L (QA,PA)
R872 39
X813 2SD471(LA,KA)
X815 2SC2001(L,K)
X814 2SD471(LA,KA)
X816 2SC2001(L,K)
R847 22 1W OMF
R852 82 1W OMF
D816 MA150
R842 56K
R844 560 1/2W
R848 560 1/2W
R851 4.7K
R850 820
X817 2SC945L (QA,PA)
D809 RD11F(B)
C812 4.7μ 16V
X818 2SC945L (QA,PA)
R845 1.8K
R846 1.8K
R843 4.7K
R841 15K
C811 47μ 16V
X812 2SC945L (QA,PA)
IC802 DN6835
MAGNET
C808 10μ50V
R834 150K
X810 2SC945L (QA,PA)
R837 22K
R835 10K
R836 10K
X811 2SC945L (QA,PA)
R839 470
R838 10K
C810 470μ 63V
R840 22K
X823 2SC945L(QA,PA)
R877 10K
R878 1K
X824 2SC945L(QA,PA)
REC PROOF SW
CASSETTE SW
L801 10μH
L802 10μH
C818 0.001
MDN-7V1
MC-950A (DD-5)
MC-951A (DD-7)

– Diode –



– Transistor –



NOTES

ALL VOLTAGES ARE MEASURED BY VTVH. WITHOUT INPUT SIGNAL. (REC MODE, TAPE SELECT·····METAL, ANRS·····OFF)

UNLESS OTHERWISE SPECIFIED.

NOTES:

1. Unless otherwise specified, all resistors are 1/4W, ±5% carbon reistors. And all capacitors are 50V fixed ceramic capacitors or 50V mylar capacitors.
2. UF – Unflammable carbon reistor.
   MF – Metal film resistor.
   OMF – Oxided metal film resistor.
   Ta – Tantalum solid electrolytic capacitor.
   LL – +20% low leak current electrolytic capacitor.
   PP – Polypropylene capacitor.
   PS – Polystyrene capacitor.
   MM – Metalized mylar capacitor.
   NP – Non-polarized electrolytic capacitor.
3. ▨ parts are safety assurance parts. When replacing those parts, make sure to use the specified one.

Fig. 27

Wiring Connection (1)

Color code are shown below

1	Brown	6	Blue
2	Red	7	Violet
3	Orange	8	Grey
4	Yellow	9	White
5	Green	0	Black

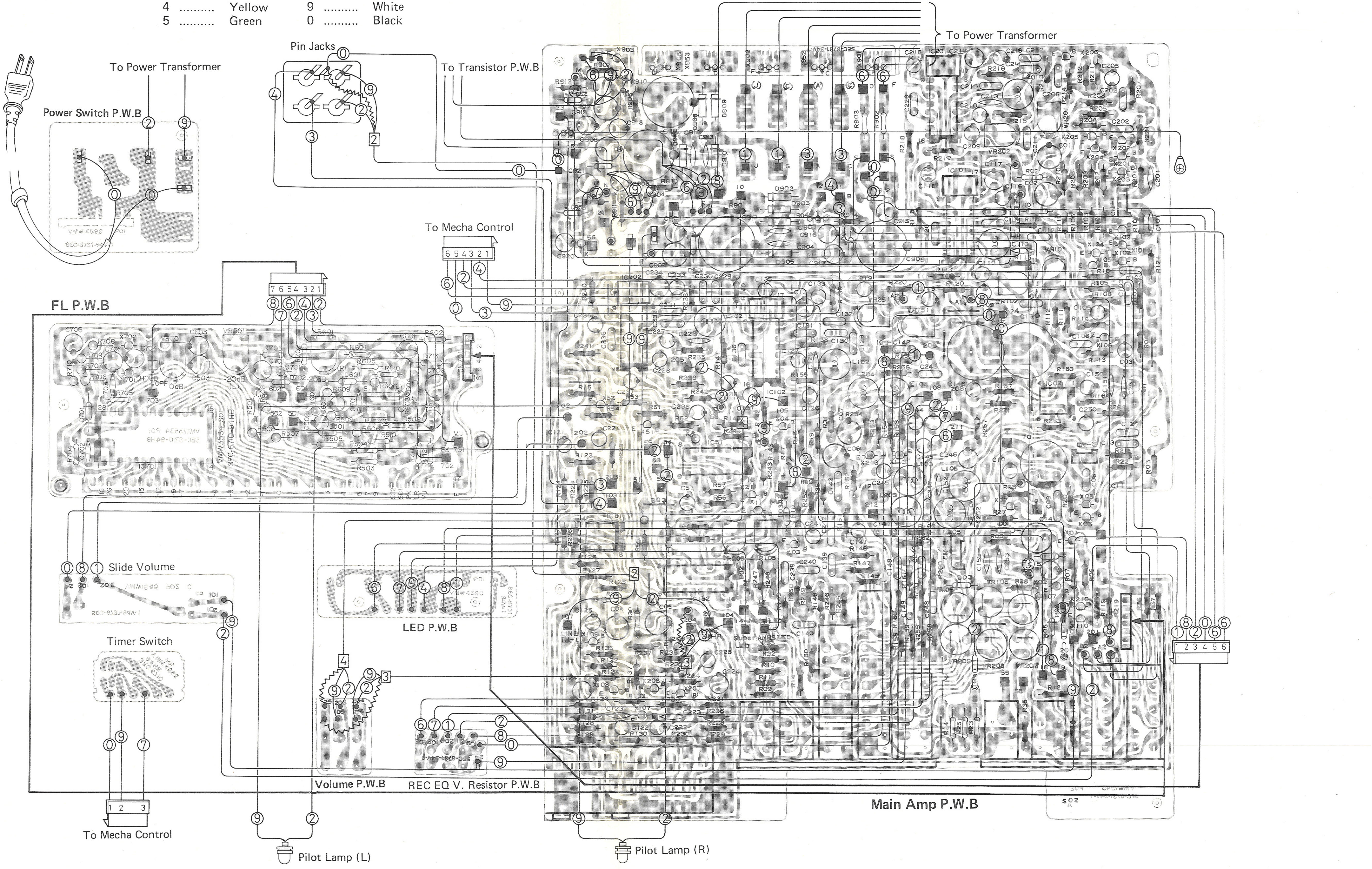

To Power Transformer
Power Switch P.W.B
Pin Jacks
To Transistor P.W.B
To Power Transformer
To Mecha Control
6 5 4 3 2 1
FL P.W.B
7 6 5 4 3 2 1
Slide Volume
Timer Switch
LED P.W.B
Volume P.W.B
REC EQ V. Resistor P.W.B
Main Amp P.W.B
1 2 3 4 5 6
1 2 3
To Mecha Control
Pilot Lamp (L)
Pilot Lamp (R)

Fig. 28

Wiring Connection (2)

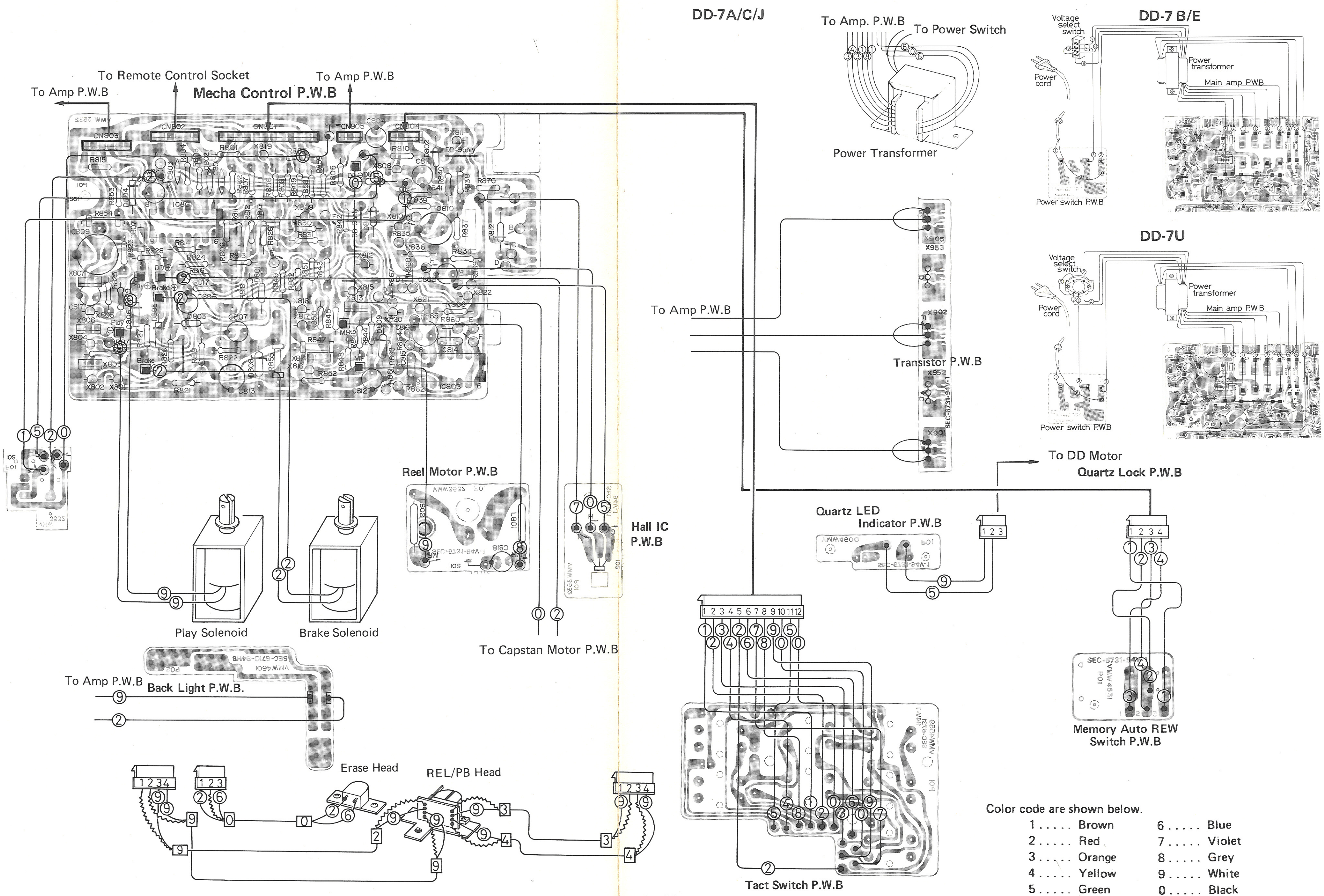

To Amp P.W.B
To Remote Control Socket
Mecha Control P.W.B
To Amp P.W.B
CN803
CN802
CN801
CN805
CN804
IC801
IC803
Play Solenoid
Brake Solenoid
Reel Motor P.W.B
Hall IC P.W.B
To Capstan Motor P.W.B
To Amp P.W.B
Back Light P.W.B.
Erase Head
REL/PB Head
DD-7A/C/J
To Amp. P.W.B
To Power Switch
Power Transformer
To Amp P.W.B
Transistor P.W.B
DD-7 B/E
Voltage select switch
Power cord
Power transformer
Main amp PWB
Power switch P.W.B
DD-7U
Voltage select switch
Power cord
Power transformer
Main amp PWB
Power switch PWB
To DD Motor
Quartz Lock P.W.B
Quartz LED Indicator P.W.B
Memory Auto REW Switch P.W.B
Tact Switch P.W.B

Fig. 29

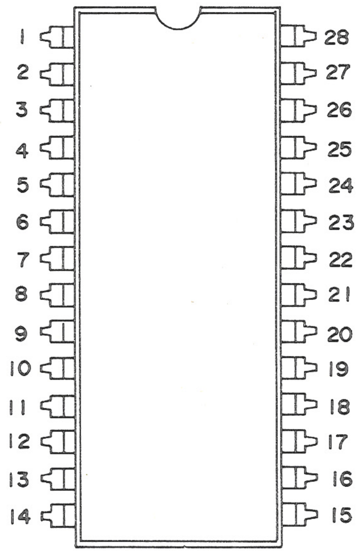
Color code are shown below.

1	Brown	6	Blue
2	Red	7	Violet
3	Orange	8	Grey
4	Yellow	9	White
5	Green	0	Black

— Continued from page 18 —

AN6870

(Top View)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Block Diagram

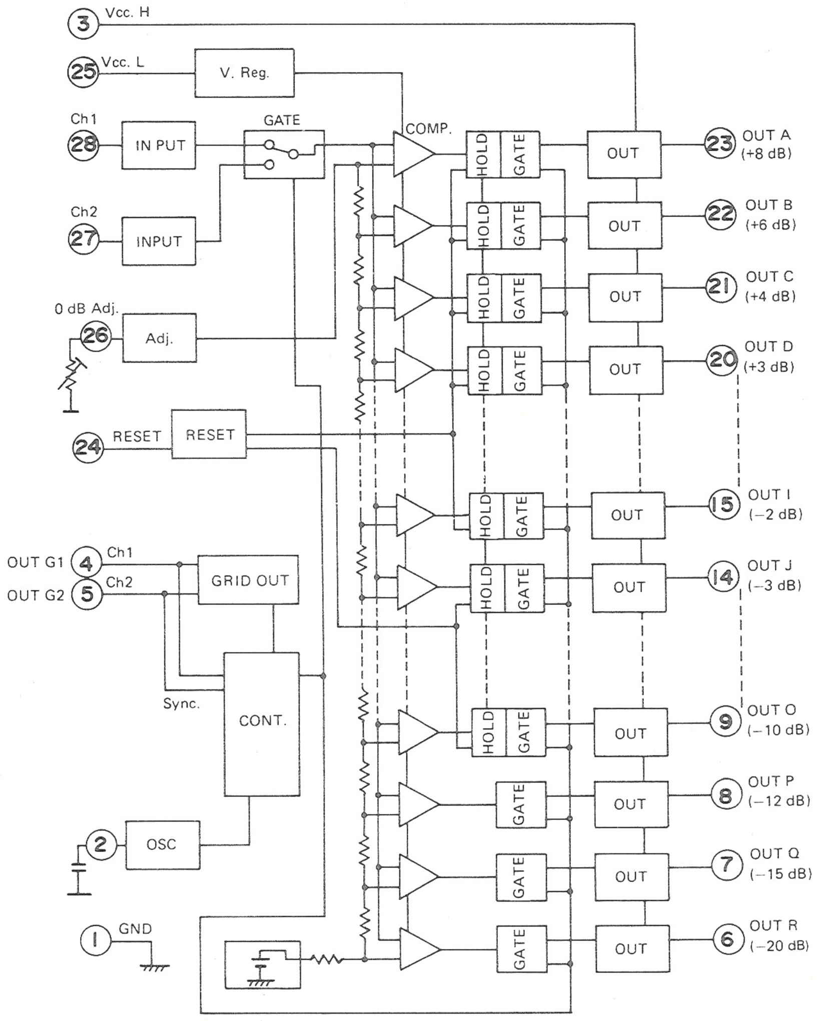

3 Vcc. H
25 Vcc. L
V. Reg.
Ch1
28 IN PUT
GATE
COMP.
Ch2
27 INPUT
0 dB Adj.
26 Adj.
24 RESET
RESET
HOLD
GATE
OUT
23 OUT A (+8 dB)
22 OUT B (+6 dB)
21 OUT C (+4 dB)
20 OUT D (+3 dB)
15 OUT I (–2 dB)
14 OUT J (–3 dB)
9 OUT O (–10 dB)
8 OUT P (–12 dB)
7 OUT Q (–15 dB)
6 OUT R (–20 dB)
OUT G1 4 Ch1
OUT G2 5 Ch2
GRID OUT
Sync.
CONT.
2 OSC
1 GND

Fig. 30

Enclosure Assembly and Electrical Parts List (Except P.W. Board Parts)

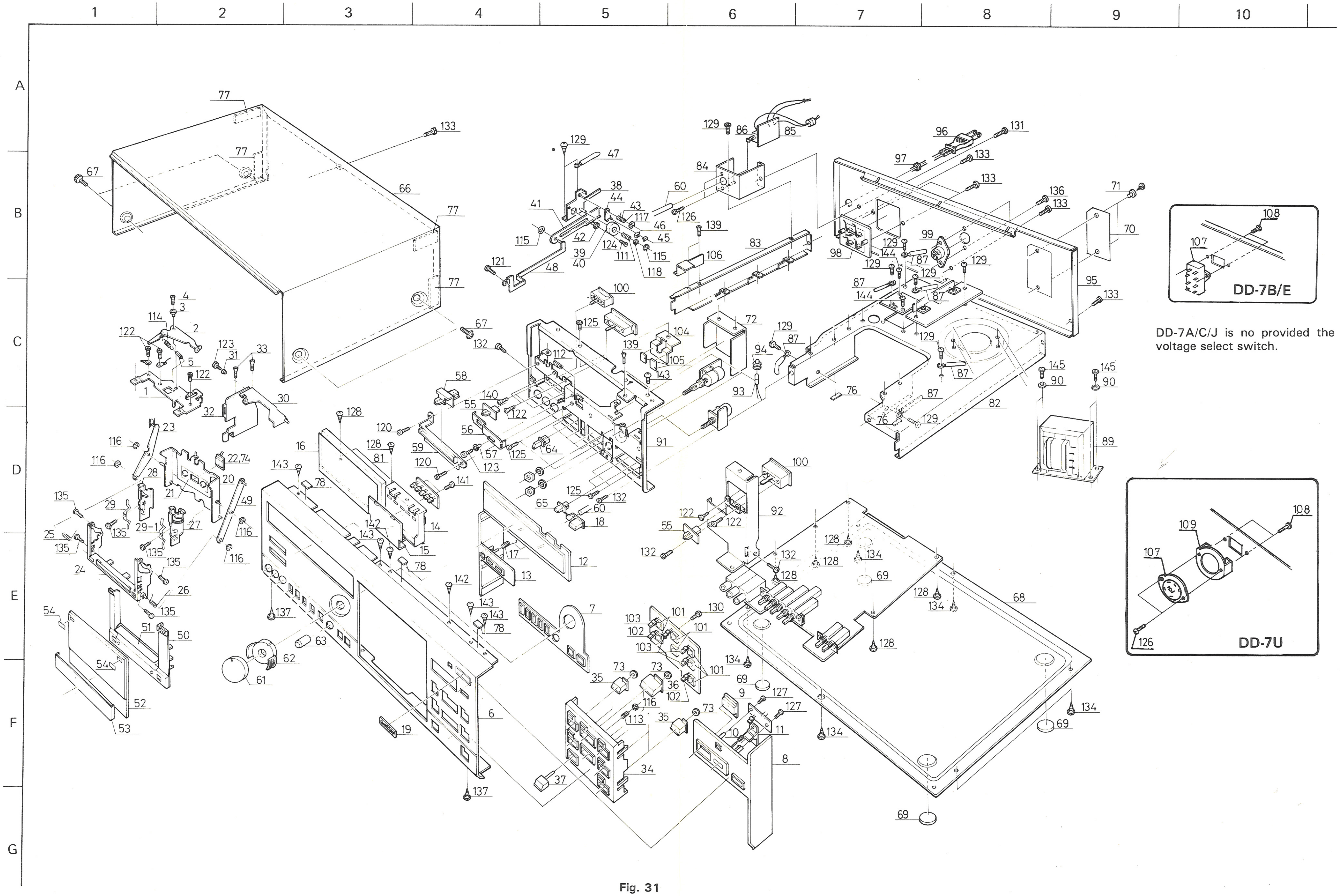
⚠parts are safety assurance parts.
When replacing those parts, make sure to use the specified one.

Ref. No.	Parts No.	Parts Name	Remarks	Q'ty
1	VKL3252-002	Bracket		1
2	VKL4839-00B	Lock Arm Ass'y		1
3	VKH3013-005	Collar		1
4	VKZ4143-002	Special Screw		1
5	TJN265559-04	Silencer		1
6～9,12 (13,16,) 19,34	ZCDD7Y-CBF	Front Plate Ass'y		1 set
6	VJC1140-003	Front Plate		1
7	VJD3244-001	Button Escutcheon		1
8	VJD3242-001	Counter Escutcheon		1
9	VJK4001-001	Counter Lens		1
10	VKW3001-058	Compression Spring		1
11	VXP4083-001	Push Button	for Reset	1
12	VJK3167-001	Finder		1
13	VJD3247-001	Power Escutcheon		1
14	VJD3249-001	LED Escutcheon		1
15	VJK4132-002	Indicator		1
16	VJK4131-001	Filter		1
17	VKW4265-002	Compression Spring		1
18	VXP4087-001	Push Button	for Power	1
19	VJD4430-001	Quartz Mark		1
20	VJD3252-00A	Holder Plate Ass'y		1
21	VJD4437-002	Disk Plate		1
22	LD-702	L.E.D		1
23	VKL4844-00A	Cross Bar Ass'y		1
24	VKL4842-00A	Holder Bracket Ass'y		1
25	VKW4250-005	Holder Spring		1
26	VKW4250-006	Holder Spring		1
27	VJD3237-003	Tape Holder (R)		1
28	VJD3238-003	Tape Holder (L)		1
29-1	VKY4217-001	Cassette Spring (R)		1
29-2	VKY4218-001	Cassette Spring (L)		1
30	VKL4403-00E	Shift Arm Ass'y		1
31	T43909-004	Metal		1
32	VKL4841-00A	Mecha Bracket (L) Ass'y		1
33	VKZ4143-002	Special Screw		2
34	VJD2165-001	Escutcheon	for Mecha. con	1
35	VXP4084-001	Push Button		5
36	VXP4085-001	''	for Stop, Play	2
37	VXP4086-00A	Push Button Ass'y	for Eject	1
38	VKL4169-00A	Gear Frame Ass'y		1
39	VKS4236-001	Spur Gear		1
40	VKS4109-004	Brake Drum		1
41	VKS3102-001	Rack Plate		1
42	VKH4123-001	Collar		1
43	VKW4106-001	Torsion Spring		1
44	VKS4110-002	Brake Arm		1
45	VKL4271-001	Rubber Retainer		1
46	VKZ4111-001	Rubber Tire		1
47	VKZ4001-011	Wire Holder		1
48	VKL4847-00A	Arm Bracket Ass'y		1
49	VKL4380-00A	Cross Bar Ass'y		1
50	VJT2049-001	Cassette Holder		1
51	VJT4035-002	Holder Plate		1
(52～54)	ZCDD5Y-CCA	Cassette Lid Ass'y		1 set
52	VJT3059-002	Cassette Lid		1
53	VJT4036-001	Lid Plate		1
54	VJT4037-001	Plate		2
55	VXS4041-001	Slide Knob	for Timer & Memory	2
56	VKL4869-001	Bracket	for Timer Safety	1
57	VKH3001-027	flange Collar		1

Ref. No.	Parts No.	Parts Name	Remarks	Q'ty
58	VXS3003-001	Slide Knob	for output	1
59	VJD4446-001	Blind		1
60	VKS4003-005	Pipe		1
61	VXL4127-00A	Knob Ass'y	for input (L)	1
62	VXL4128-001	Volume Knob	for input (R)	1
63	VXL4132-00A	Knob	for Rec EQ	1
64	VXP4088-001	Push Button		5
65	VXP4095-001	Push Button		2
66	VJC1141-001	Top cover		1
67	VKZ3002-001	Special Screw		4
68	VJC1142-001	Bottom Cover		1
69	VJF4003-002	Foot		4
70	VYN2075-003KA	Name Plate	DD-7A	1
	″ -002KA	″	DD-7B	1
	″ -004KA	″	DD-7C	1
	″ -005KA	″	DD-7E	1
	″ -006KA	″	DD-7J	1
	″ -007KA	″	DD-7U	1
71	E48729-002	Plastic Rivet		2
72	VKL3285-001	Wall Bracket		1
73	VYSH203-001	Spacer		1
74	VMW4601-001	P.W. Board	Back light	1
75	VKZ4001-009	Wire Holder		1
76	VYSR102-017	Spacer		2
77	VYSR103-018	Spacer		4
78	VYSR102-013	Spacer		3
79	VYH4514-002	Shield case		1
81	VDL2075-002D	Display Ass'y		1
82	VKL1192-001	Amp. Chassis (R)		1
83	VKL2126-002	″ (L)		1
84	VKL4868-001	Power Bracket		1
85	VMW4588-001	P.W. Board	for Power	1
86	⚠ QSP1110-305	Push Switch	for Power, DD-7A/E	1
	⚠ QSP1110-305BS	″	″ , DD-7B	1
	⚠ QSP1110-308	″	″ , DD-7C/J	1
	QSP1110-306	″	″ , DD-7U	1
87	VKZ4001-011	Wire Holder		2
88	QHW3059-001	Wire Clamp		1
89	⚠ VTP66T8-011K	Power Transformer	DD-7A	1
	VTP66C8-011KBS	″	DD-7B	1
	⚠ VTP66A8-011K	″	DD-7C/J	1
	⚠ VTP66C8-011K	″	DD-7E	1
	⚠ VTP66U8-011K	″	DD-7U	1
90	WNS3000S	Washer		4
91	VKL1193-001	Front Bracket		1
92	VKL3259-002	Switch Bracket	for Memory	1
93	QLP3104-333SN	Pilot Lamp		2
94	VYH4315-001	Lamp Holder		2
95	VJC1139-005	Rear Panel	DD-7A/C/J	1
	″ -002	″	DD-7B/E/U	1
96	⚠ QMP2560-200	Power Cord	DD-7A	1
	⚠ QMP9017-008BS	″	DD-7B	1
	⚠ QMP1200-200	″	DD-7C/J	1
	⚠ QMP3900-200	″	DD-7E	1
	⚠ QMP7600-200	″	DD-7U	1
97	⚠ QHS3876-162BS	Strain Relief	DD-7B	1
	⚠ QHS3876-162	″	DD-7A/C/E/J/U	1
98	VMJ3003-001	PIN jack Ass'y		1
99	QMC0888-008	DIN Socket	for Remote	1
100	QSS2301-102	Slide Switch	for Timer	1
101	QSP0021-002A	Tact Switch		7
102	SLP-155B-01V	LED		2
103	SLP-255B-01V	LED		4
104	VKL4882-001	Meter Bracket		1
105	VYSH104-011	Spacer		2

Ref. No.	Parts No.	Parts Name	Remarks	Q'ty
106	VKL4946-001	Bracket		1
107	⚠QSS2325-011BS	Voltage select Switch	DD-7B	1
	⚠QSS2325-011	″	DD-7E	1
	⚠QSR0084-001	″	DD-7U	1
108	SDSP3006RS	Screw	for Voltage select switch DD-7B/E V.S.SW. Bracket DD-7U	2
109	VKL4275-001	Bracket	for Voltage Select Switch DD-7U	1
111	VKW3001-006	Spring		1
112	″ -025	Compresion Spring		1
113	″ -028	″		1
114	VKW3002-043	Spring		1
115	REE2000	E Ring	Brake Dram x 1 Arm Bracket Ass'y x 1	2
116	REE2500	″		5
117	Q03093-524	Washer		1
118	WNS2600Z	″		1
119	DPSP3006VS	Screw		2
120	VKH4150-001	Saft	Blind	2
121	LDSP2604R	″		1
122	LPSP2605	″		3
123	LPSP2606Z	Screw	Metal x 1 Flange Collar x 1	2
124	LPSP2608Z	″		1
125	LPSP3006VS	″	Push Switch x 4 Meter Bracket x 1	5
126	LPSP3006ZS	″	Voltage select Switch, DD-7U	2
127	SBS2608V	″		2
128	SBSB3006VS	″	Display P.W.B x 2 Main ~ chassis x 4	6
129	SBSB3006Z	″	Rubber tire x 2 Power bracket x 1 Wire holder x 1 Power transformer x 2	6
130	SBSF2610Z	″	P.W.B ~ Escutcheon	1
131	SDSB3006R	″	Power Bracket	1
132	SDSB3006Z	″	Front Bracket x 2 Switch Bracket x 2	4
133	SDSB3008R	″	Amp. ~ Rear Panel x 3 Pin jack x 2	5
134	SDSB3008Z	″	Bottom Cover	5
135	SDSF2605R	″	Tape holder (R) x 2 ″ (L) x 2 Cassette spring x 2	6
136	SDSP2605R	Screw	Remote	2
137	SDSP3008RS	″	Bottom cover ~ Front Bracket Switch Bracket	
138	SDSB3006C	″	Mecha ~ Amp. Chassis	2
139	SSSB3006Z	″	Bracket x 2	3
140	SSSP2004Z	″	Output Level	2
141	SSSP2605Z	″	Memory & Timer	4
142	SSSP3006CS	″	Mecha ~ Front Plate x 2 Chassis Bracket ~ Front Plate x 1	3
143	SSSP3006ZS	″	Switch Bracket ~ Front Plate x 1 Front Bracket ~ Front Plate x 3 Wall Bracket x 2	6
145	SDSC3008Z	″	Power Transformer	4
146	SBSC3006C	″		2
	QHZ2075-001	Wire Clamp	for wires	23
	TAH000459-01	Mark	CN804	1

Enclosure Assembly and Electrical Parts (Except P.W. Board Parts)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DD-7B/E
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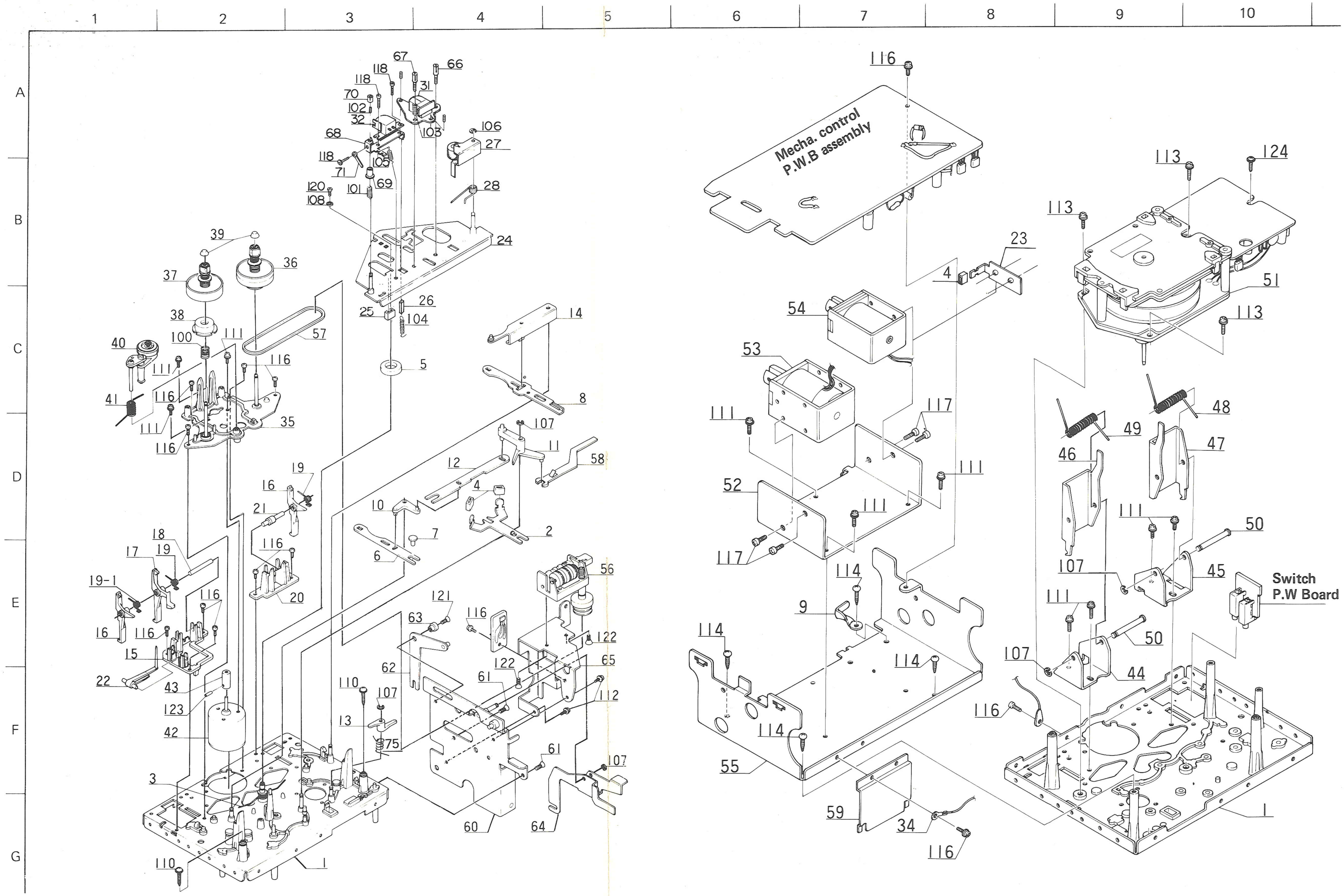
DD-7U

DD-7A/C/J is no provided the voltage select switch.

Fig. 31

Mechanical Component Parts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Mecha. control
P.W.B assembly
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114
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Switch
P.W Board
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107
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116
114
55
59
34
1
116

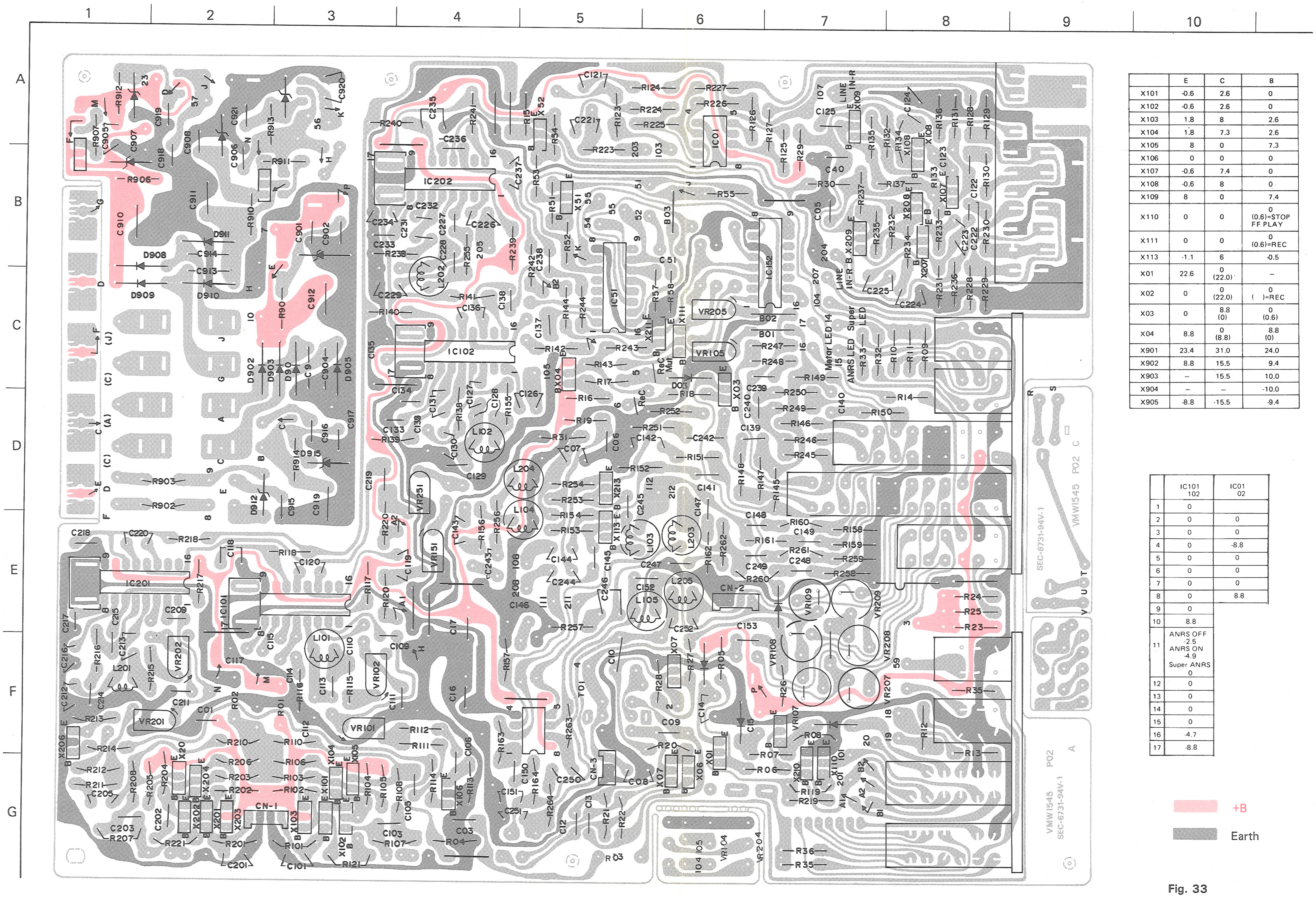
Fig. 32

Mechanical Component Parts List

Ref. No.	Parts No.	Parts Name	Remarks	Q'ty
1	VKL1184-00B	Chassis Base Ass'y		1
2	VKL4823-001	Brake Bar		1
3	VKW4243-001	Brake Bar Spring		1
4	VKZ4129-001	Rubber Tire		2
5	VKZ4005-002	Stopper		1
6	VKL4824-001	Lock Plate (1)		1
7	VKS4233-001	Lock Bush		3
8	VKL4945-001	Slide Plate		1
10	VKS4258-00B	Connecting Lever Ass'y		1
11	VKS4260-00B	Lock Lever Ass'y		1
12	VKL4827-001	Lock Plate (2)		1
13	VKS4262-001	Pause Lever		1
14	VKL4828-00A	Play Arm Ass'y		1
15	VKS2110-02	Switch Holder (L)		1
16	VKS4263-001	Pressure Lever		2
17	VKS4264-001	Switch Lever		1
18	VKH4264-001	Shaft		1
19	VKW4138-001	Pressure Lever Spring		2
19-1	VKW4191-001	Pressure Lever Spring		1
20	VKS3125-001	Switch Holder (R)		1
21	VKH4196-001	Shaft		1
22	VKS4265-002	Cassette Switch Lever		1
23	VKL4944-001	Stopper		1
24	VKL4874-00A	Slide Base Ass'y		1
25	VKZ4129-001	Rubber Tire		1
26	TJN265559-02	Silenser		1
27	VKP4113-00A	Pinch Roller Arm Ass'y		1
28	VKW4240-001	Pinch Roller Spring		1
29	VKS4266-001	Shift Lever		1
31	VGH0425-301-0A	Rec/PB Head Ass'y	Head plate = VND4020-001	1
32	ZMM090424-0A	E. Head Ass'y	Head plate = THC037417-02	1
34	VMZ0008-00A	Wire Ass'y		1
35	VKL3155-00A	Reel Disk Bracket Ass'y		1
36	VKR4113-00C	Take up Reel Ass'y		1
37	VKR4118-00B	Supply Reel Ass'y		1
38	VKS4130-001	Back Tension Base		1
39	VKS4131-002	Reel Stopper		2
40	VKS4151-005	Idler Ass'y Unit		2
41	VKW4134-001	Idler Spring		1
42	MDN-7V1-3	Reel Motor		1
43	VKR4121-001	Motor Pulley		1
44	VKL4832-001	Shaft Holder		1
45	VKL4832-002	Shaft Holder		1
46	VKL4833-001	Solenoid Lever		1
47	VKL4833-002	Solenoid Lever		1
48	VKW4241-001	Solenoid Lever Spring		1
49	VKW4241-002	"		1
50	VKH4292-001	Shaft		1
51	MC951A	DD Motor Ass'y		1
52	VKL4867-001	Solenoid Bracket		1
53	VGP0301-005	D.C. Solenoid Ass'y		1
54	VGP0201-008	D.C. Solenoid Ass'y		1
55	VKL3254-001	Holde Bracket		1
56	VKC6114-001S	Counter Ass'y	Counter Knob =VKC5139-002S	1
57	VKB3000-025	Counter Belt		1
58	VKL4912-002	Lock Bar		1
59	VKL4913-001	Flywheel Cover		1
60	VKL4835-00A	Mecha Bracket (R) Ass'y		1
61	VKZ4143-002	Special Screw	for Mecha Bracket	2
62	VKL4836-00A	Eject Arm Ass'y		1
63	VKH3013-004	Flange Collar		1

Ref. No.	Parts No.	Parts Name	Remarks	Q'ty
64	VKL4838-003	Eject Lever		1
65	VKL4870-002	Counter Bracket		1
66	VKH4238-001	Azimuth Screw		1
67	VKH4239-001	Rec/PB Head Screw		1
68	VKF4110-001	E. Head Lever		1
69	VKH3001-041	Flange Collar	for E Head Lever	1
70	VKH4240-001	Adjust Screw		1
71	VKZ4001-009	Wire Holder		1
72	VKY4212-001	Wire Holder		2
73	VKZ4001-011	Wire Holder		1
74	VYSR110-009	Spacer		1
75	VKW4268-001	Torsion Spring		1
100	VKW3001-026	Compretion Spring	Back Tention	1
101	″ -060	″		1
102	″ -040	″		1
103	″ -047	″	Azimuth screw	1
104	VKW3002-005	Tension Spring	Slide Base	2
105	-043	″		1
106	REE2000	E Ring		1
107	REE2500	″		6
108	WNS3000N	Washer		1
109	Q03095-206	Washer		1
110	GPSA2612Z	Tapping Screw	Slide Base	2
111	LPSP2604Z	Screw	Shaft Holder x 4 Solenoid Bracket x 3 Reel Motor x 3	10
112	LPSP2605Z	″	Counter Bracket	2
113	LPSP2606Z	″	DD Motor Ass'y	3
114	SBSB2608Z	Tapping Screw	Holder Bracket	4
116	SPSP2606Z	″	Switch Holder (L) x 2 ″ (R) x 3 Reel Ass'y Unit x 4 Flywheel Cover x 1	10
117	SPSP3004ZS	Screw	D.C. Solenoid Ass'y	4
118	SPSP2004N	″	Erase Head	6
120	SSSK2605Z	Mini Screw	Slide Base	1
121	SSSP2605Z	Screw	Flange Collar	1
122	SSSP3006ZS	″	Counter Ass'y	2
123	YRS2603B	″	Motor Pulley	1
124	GPSA2608Z	Tapping Screw	D.D. Motor Ass'y	1

P.W. Board Parts (1) Main Amplifier Circuit


1
2
3
4
5
6
7
8
9
10
A
B
C
D
E
F
G
IC202
IC102
IC201
IC101
IC01
IC51
IC152
VR205
VR105
VR251
VR151
VR202
VR201
VR101
VR102
VR109
VR209
VR108
VR208
VR107
VR207
VR104
VR204
L102
L202
L204
L104
L103
L203
L205
L105
L101
L201
CN-1
CN-2
CN-3
B02
B01
Meter LED 14
15
ANRS LED
Super LED
LINE IN-R
LINE IN-R B
Rec Mut
Rec
P02
VMW1545
SEC-6731-94V-1

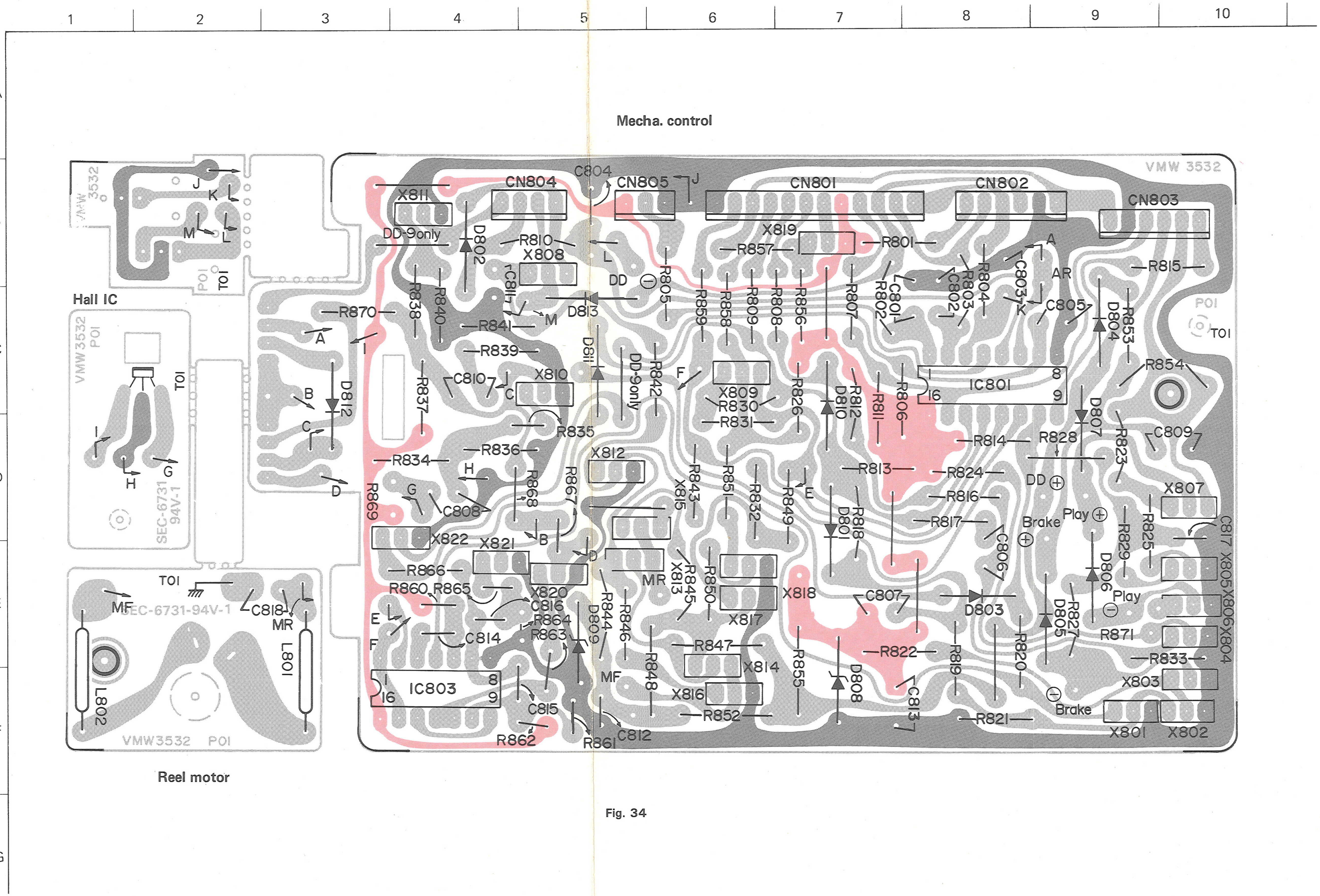
	E	C	B
X101	-0.6	2.6	0
X102	-0.6	2.6	0
X103	1.8	8	2.6
X104	1.8	7.3	2.6
X105	8	0	7.3
X106	0	0	0
X107	-0.6	7.4	0
X108	-0.6	8	0
X109	8	0	7.4
X110	0	0	0 (0.6)=STOP FF PLAY
X111	0	0	0 (0.6)=REC
X113	-1.1	6	-0.5
X01	22.6	0 (22.0)	–
X02	0	0 (22.0)	0 ( )=REC
X03	0	8.8 (0)	0 (0.6)
X04	8.8	0 (8.8)	8.8 (0)
X901	23.4	31.0	24.0
X902	8.8	15.5	9.4
X903	–	15.5	10.0
X904	–	–	-10.0
X905	-8.8	-15.5	-9.4

	IC101 102	IC01 02
1	0	
2	0	0
3	0	0
4	0	-8.8
5	0	0
6	0	0
7	0	0
8	0	8.8
9	0	
10	8.8	
11	ANRS OFF -2.5 ANRS ON -4.9 Super ANRS 0	
12	0	
13	0	
14	0	
15	0	
16	-4.7	
17	-8.8	

🟥	+B
▨	Earth

Fig. 33

P.W. Board Parts (2)


1
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3
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5
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7
8
9
10
A
B
C
D
E
F
G
Mecha. control
Hall IC
Reel motor
VMW 3532
VMW3532 POI
SEC-6731 94V-1
SEC-6731-94V-1
TOI
POI
J
K
M
L
A
B
C
D
E
F
G
H
I
MF
MR
AR
DD
DD-9only
Brake
Play
CN801
CN802
CN803
CN804
CN805
C801
C802
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C804
C805
C806
C807
C808
C809
C810
C811
C812
C813
C814
C815
C816
C817
C818
D801
D802
D803
D804
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D807
D808
D809
D810
D811
D812
D813
IC801
IC803
L801
L802
R801
R802
R803
R804
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R811
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R820
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R832
R833
R834
R835
R836
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R840
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R842
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R844
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R849
R850
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R859
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R861
R862
R863
R864
R865
R866
R867
R868
R869
R870
R871
X801
X802
X803
X804
X805
X806
X807
X808
X809
X810
X811
X812
X813
X814
X815
X816
X817
X818
X819
X820
X821
X822

Fig. 34

⚠ parts are safety assurance parts.
When replacing those parts, make sure to use the specified one.

Main Amp. P.W. Board Parts List

Ref. No.	Parts No.	Parts Name	Remarks	Q'ty
	VMW1545-003	P.W.B		1
R101,201	QRD147J-154S	C. Resistor	150kΩ 1/4W	2
R102,202,104,204, 129,229,151,251	QRD141J-333S	″	33kΩ ″	8
R103,203,105,205, 106,206,135,235, 05,06	QRD141J-223S	″	22kΩ ″	10
R107,207	QRD143J-221S	″	220Ω ″	2
R108,208,114,214, 167,267,168,268, 03,04,09, 15~18,27,28	QRD141J-103S	″	10kΩ ″	17
R109,209,36,37	QRD147J-224S	″	220kΩ ″	4
R110,210,137,237, 144,244,153,253, 154,254,163,263, 26,31	QRD141J-472S	″	4.7kΩ ″	14
R111,211	QRD141J-822S	″	8.2kΩ ″	2
R112,212,39	QRD147J-682S	″	6.8kΩ ″	3
R113,213,118,218, 136,236,140,240, 147,247,169,269, 07,04	QRD141J-104S	″	100Ω ″	14
R115,215,32,33	QRD141J-821S	″	820Ω ″	4
R116,216,138,238	QRD141J-680S	″	68Ω ″	4
R117,217,139,239	QRD141J-155S	″	1.5MΩ ″	4
R119,219,132,232	QRD141J-123S	″	12kΩ ″	4
R120,220,141,241, 142,242,155,255	QRD141J-102S	″	1kΩ ″	8
R121,221	QRD147J-391S	″	390Ω ″	2
R123,223	QRD141J-332S	C. Resistor	3.3kΩ ″	2
R124,224	QRD141J-184S	″	180kΩ ″	2
R125,225,126,226	QRD141J-474S	″	470kΩ ″	4
R127,227,162,262, 38	QRD141J-151S	″	150Ω ″	5
R128,228,133,233, 145,245	QRD141J-823S	″	82kΩ ″	6
R130,230	QRD141J-820S	″	82Ω ″	2
R131,231	QRD141J-103S	″	10kΩ ″	2
R134,234 143,243	QRD147J-271S	″	270Ω ″	2
R150,250,143,243	QRD141J-272S	″	2.7kΩ ″	4
R148,248	QRD141J-273S	″	27kΩ ″	2
R149,249	QRD141J-683S	″	68kΩ ″	2
R152,252	QRD141J-334S	″	330kΩ ″	2
R156,256,35	QRD141J-222S	″	2.2kΩ ″	3
R157,257	QRD141J-152S	″	1.5kΩ ″	2
R158,258,159,259	QRD141J-124S	″	120kΩ ″	4
R160,260	QRD141J-121S	″	120Ω ″	2
R161,261	QRD141J-331S	″	330Ω ″	2
R164,264	″ -392S	″	3.9kΩ ″	2
R165,265,166,266	QRD143J-182S	″	1.8kΩ ″	4
R01,02,19,29,30	QRD149J-221S	C.Resistor	220Ω ″	5
R08	QRD147J-473S	″	47kΩ ″	1
R11,915	QRD147J-471J	″	470Ω ″	2
R12,13,14	QRD141J-821S	″	820Ω ″	3
R20	QRD149J-100S	″	10Ω ″	1
R21,22	QRD141J-563S	″	56kΩ ″	2
R23	QRD149J-561S	″	560Ω ″	1
R24	″ -122S	″	1.2kΩ ″	1
R25	″ -391S	″	390Ω ″	1

Ref. No.	Parts No.	Parts Name	Remarks	Q'ty
R901	QRD149J-821S	″	820Ω 1/4W	1
R902,903	″ -8R2S	″	8.2Ω ″	2
R906,910	QRD147J-562S	″	5.6kΩ ″	2
R907,911	QRD149J-330S	″	33Ω ″	2
VR101,201,105,205	QVP8A0B-024	V. Resistor	20kΩ	4
VR102,202	″ -014	″	10kΩ	2
VR103,203	QVR2A6A-014	V. Resistor	10kΩ	2
VR104,204	QVL6A7A-054VL	V. Resistor	50kΩ	1
VR106,206	QVD8A2A-124V	″	120kΩ	1
VR107,207,109,209	QVZ3501-473	″	47kΩ	4
VR108,208	QVZ3501-223	″	22kΩ	2
C101,201	QCS11HJ-271	C. Capacitor	270pF 50V	2
C101,202	QFM41HJ-682	M. Capacitor	0.0068μF ″	2
C103,203	QFM41HJ-123	″	0.012μF ″	2
C104,204,124,224	QET40JR-107N	E. Capacitor	100μF 6.3V	4
C105,205,137,237, 138,238,141,241, 144,244,145,245,15	QET41HR-335N	″	3.3μF 50V	13
C106,206	QFM41HJ-822	M. Capacitor	0.0082μF ″	2
C109,209,110,210, 126,226,127,227	QEB41EM-105M	L.L.C.E. Capacitor	1μF 25V	8
C111,211,129,229	QFM41HJ-103	M. Capacitor	0.01μF 50V	4
C112,212,143,243	QFM41HJ-272	″	0.0027μF ″	4
C113,213	QCS11HJ-151	C. Capacitor	150pF ″	2
C114,214,132,232	QFM41HJ-273	M. Capacitor	0.027μF ″	4
C115,215,131,231, 149,249	QFM41HJ-222	M. Capacitor	0.0022μF ″	6
C116,216,133,233	QEB41EM-334M	L.L.C.B. Capacitor	0.33μF 25V	4
C117,217,134,234	QEB41EM-475M	″	4.7μF ″	4
C118,218,135,235, 146,246,10,03	QET41ER-106N	″	10μF ″	8
C120,220,136,236	QFM41HJ-332	M. Capacitor	0.0033μF 50V	4
C121,221	QET41HR-104N	E. Capacitor	0.1μF ″	2
C122,222	QEB41EM-335M	L.L.C.E. Capacitor	3.3μF 25V	2
C125,225	QET41HR-105N	E. Capacitor	1μF 50V	2
C128,228	QCS11HJ-471	C. Capacitor	470pF ″	2
C130,230,12,13	QFM41HJ-472	M. Capacitor	0.0047μF ″	4
C139,239	QFM41HJ-122	″	0.0012μF ″	2
C140,240	QFM41HJ-152	″	0.0015μF ″	2
C142,242	QFM41HJ-104	″	0.1μF ″	2
C147,247	QFM41HJ-183	″	0.018μF ″	2
C148,248	QFM41HJ-562	″	0.0056μF ″	2
C150,250	QET41CR-336N	E. Capacitor	33μF 1.6V	2
C151,251	QCS11HJ-391	C. Capacitor	390pF 50V	2
C152,252	QCS12HJ-151	″	150pF 500V	2
C153,253	QCY12HK-221	″	220pF 500V	2
C155,255	QCS11HJ-100	″	10pF 50V	2
C156,256	QCS11HJ-220	″	22pF ″	2
C157,257,158,258	QCS11HJ-470	″	47pF ″	4
C01,02,06	QET41CR-107N	E. Capacitor	100μF 16V	3
C04,05	QET41CR-227N	″	220μF 16V	2
C07	QET41CR-476N	″	47μF 16V	1
C08	QFP42AJ-103	P.P. Capacitor	0.01μF 100V	1
C09	QFP82AJ-822	P.P. Capacitor	0.0082μF 100V	1
C11	QFM41HJ-153	M. Capacitor	0.015μF 50V	1
C14	QET41ER-227N	E. Capacitor	220μF 25V	1
C16,17	VCE41HM-477N	″	470μF 50V	2
C18	QET41CR-227N	″	220μF 16V	1
C19	QET41HR-475N	″	4.7μF 50V	1
C901	QET41ER-336N	E. Capacitor	33μF 25V	1
C902	QET41ER-107N	″	100μF ″	1
C903,904	QCF12HP-103	C. Capacitor	0.01μF 500V	2

Ref. No.	Parts No.	Parts Name	Remarks	Q'ty
C905,906,907,908	QET41CR-107N	''	100μF 16V	4
C909	QET41ER-107N	''	'' 25V	1
C910,911	⚠QET41ER-228N	''	2200μF ''	2
C912	QET41VR-108N	''	1000μF 35V	1
C913,914	QCF12HP-103	''	0.01μF 500V	2
D01,04,05,06	MA150	Si. Diode	or DS442	5
D03	OA90	Ge. Diode		1
D901	RD24E(B3)	Diode		1
D902,903,904,905	⚠10E2-B	''		4
D906,907	RD10E(B)	''		2
D908,909,910,911	10E1-B	''		4
X101,201,102,202	2SC1844(E,V)	Si. Transistor		4
X103,203,104,204, 107,207,108,208, 110,210,111,211	2SC1327(T.V)	''		12
X105,205	2SA992(F.E.V)	''		2
X106,206,113,213, 02,03	2SC1684(R,S)	''		6
X01,04	2SA564(R.S)	''		2
X05,06,07	2SC1685(R.S)	''		3
X901,902	⚠2SC1162(B.C)	''		2
X903	2SC1685(R.S)	''		1
X904	2SA564A(R.S)	Si. Transistor		1
X905	⚠2SA715(B.C)	''		1
L101,201	VQP0001-183	Inductor		2
L102,202	VQP0006-562	''		2
L103,203	VQP0001-332	''		2
L104,204	VQP0001-562	''		2
L105,205	VQP0001-183	''		2
IC101,201,102,202	AN7362N	IC		4
IC01	VPC4557C	''		1
IC02	VPC4556C	''		1
	TAX000331-02	Fuse Holder		8
	⚠QMF51A2-1R25	Fuse	DD-7A1E	2
	⚠QMF51A2-1R25BS	''	DD-77B	2
	⚠QMF51A2-1R25	Fuse	DD-7A1E	2
	⚠QMF51A2-1R25BS	Fuse	DD-7B	2
	TAZ000509-10	Fuse Seal	T1.25A	4
T01	VQH1009-014	OSC Coil		1
	QSP0040-002	Push Switch	T. S & NR	1
	QSP0229-151	''	M & FL	1
	VMJ5004-003	Jack Ass'y	MIC	1
	QMV5005-003	Plug Ass'y	E. Head	1
	QMV5005-004	''	P. Head R. Head	2
	QMV5005-007	''	FL	1
	VKL4941-002	Heat Sink		1
	LPSP3006ZS	Screw		3
	SBSB3006VS	''		2
	E40130-001	Tab	Lamp	3
	E43727-002	''		39
	VMZ0005-001	Post Pin		4
	QWY123-019	Bus Wire	B01, 02	15
	V44611-007	''		1
	V44611-009	''		1

Mechanical Control P.W. Board Parts List

⚠parts are safety assurance parts.
When replacing those parts, make sure to use the specified one.

Ref. No.	Parts No.	Parts Name	Remarks	Q'ty
R801,809	QRD147J-181S	C. Resistor	180Ω 1/4W	2
R802~805,815,817 818,843,849,851, 856,857,899	" -472S	"	4.7kΩ "	13
R806	QRD147J-104S	"	100kΩ "	1
R807	V44611-008	Formed Bus Wire		1
R808,858,859	QRD147J-271S	C. Resistor	270Ω "	4
R810	" -561S	"	560Ω "	1
R811,812,813,814, 826	" -152S	"	1.5kΩ "	5
R816,819,821,823, 830,831,835,836, 838,878	" -103S	"	10kΩ "	10
R820	" -682S	"	6.8kΩ "	1
R822,874	QRD143J-331S	"	330Ω "	1
R824	QRD147J-221S	"	220Ω "	1
R825	" -332S	"	3.3kΩ "	1
R827,837,840	" -223S	"	22kΩ "	3
R829,873	" -272S	"	2.7kΩ "	2
R833	QRD147J-123S	C. Resistor	12kΩ "	1
R834	" -154S	"	150kΩ "	1
R839	QRD143J-471S	"	470Ω "	1
R841	QRD147J-153S	"	15kΩ "	1
R842	" -563S	"	56kΩ "	1
R844	QRD121K-561	"	560Ω 1/2W	1
R845,846	QRD147J-182S	"	1.8kΩ 1/4W	2
R847	⚠ QRG019J-220	O.M.F. Resistor	22Ω 1W	1
R848	QRD121K-561	C. Resistor	560Ω 1/2W	1
R850	QRD147J-821S	"	820Ω 1/4W	1
R852	⚠ QRG019J-820	O.M.F. Resistor	82Ω 1W	1
R853	⚠ QRD126J-220	Unflammable Resistor	22Ω 1/2W	1
R854	⚠ QRG019J-391	O.M.F. Resistor	390Ω 1W	1
R855	⚠ QRG029J-101	"	100Ω 2W	1
R872	⚠ QRD143J-390S	C. Resistor	39Ω 1/4W	1
R875	QRD143J-154S	C. Resistor	150kΩ "	1
R876	" -101S	C. Resistor	100Ω "	1
	V44611-008	Formed Bus Wire		7
C801,802,803	QCF11HP-103	Fixed C. Capacitor	0.01μF 50V	3
C804,820	QET41HR-105N	E. Capacitor	1μF "	2
C805	QEB41HM-474M	" (Low Leak)	0.47μF "	1
C806,817	QET41CR-226N	E. Capacitor	22μF 16V	2
C807,808,819	QET41HR-106N	"	10μF 50V	3
C809	QET41VR-477N	"	470μF 35V	1
C810,813	QET40JR-477N	"	470μF 6.3V	2
C811,812	QET41CR-476N	"	47μF 16V	2
C818	QCF11HP-102	C. Capacitor	0.001μF 50V	1
C821	QET41ER-108N	E. Capacitor	1000μF 25V	1
D801,802,803,810, 813,814,816	MA150	Si. Diode		7
D804~807	10E1-B	"		4
D808	RD5.1F(B)	Zener Diode		1
D809	RD11F(B)	"		1
X801,802,804,805, 808~812	2SC945L(QA,PA)	Si. Transistor		9
X803,806	2SD571(LA,KA)	"		2
X813,814	2SD471(LA,KA)	Si. Transistor		2
X815,816	2SC2001(L,K)	"		2
X817,818,823,824	2SC945L(QA,PA)	"		4
X819	2SA733A(P,K)	"		1
IC801	M54886P	IC		1
IC802	DN6835	"		1
CN801	QMV5004-012	Plug Ass'y		1
CN802,803	" -006	"		2
CN804	" -004	"		1
CN805	" -003	"		1
	TAH000459-01	Mark	for CN803	1
	E43727-003	Wrapping Pin		8
	QCF11HP-473	F. C. Capacitor		1
	50242-5	Lug		1
	QSP0029-001	Slide SW	for Tape SW Rec Proof	2
L801,802	T41572-001	Inductor		2
	V44611-007	Formed Bus Wire		1
	QMV5004-003	Plug Ass'y		1

Display P.W. Board Parts

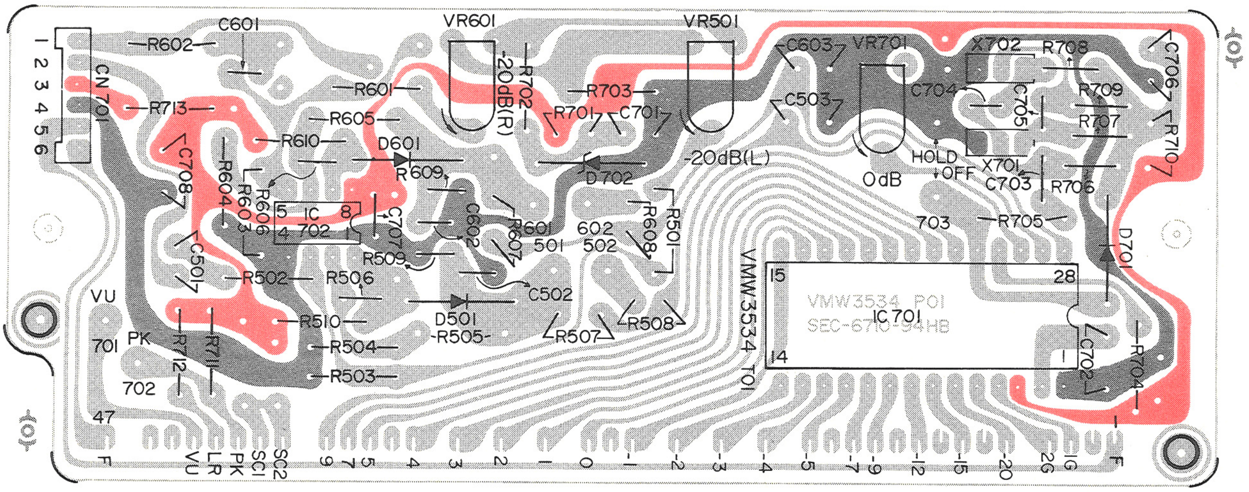
C601
R602
VR601
VR501
CN701
1 2 3 4 5 6
R713
R601
R605
R610
D601
R702
-20dB(R)
R703
R701
C701
-20dB(L)
C603
VR701
C503
X702
R708
C704
C705
C706
R709
R707
R710
HOLD
OFF
X701
C703
R706
0dB
703
R705
D701
C708
R604
R603
R606
IC 702
5 8 4 1
C707
R609
C602
D702
R601
602
501
502
R608
R501
R509
C501
R502
R506
C502
VMW3534 T01
15
28
VMW3534 P01
SEC-6710-94HB
IC701
14
C702
R704
VU
701
PK
702
R712
R711
R510
R504
R503
D501
R505
R507
R508
47
F
VU
LR
PK
SC1
SC2
9 7 5 4 3 2 1 0 -1 -2 -3 -4 -5 -7 -9 -12 -15 -20 2G 1G F

Fig. 35

Display P.W. Board Parts List

⚠ parts are safety assurance parts.
When replacing those parts make sure to use the specified one.

Ref. No.	Parts No.	Parts Name	Remarks		Q'ty
	VMW3534-101	P.W.B			1
	BG-70ZS	FL. Tube			1
IC701	AN6870	IC			1
IC702	UPC358C	"			1
X701,702	2SC945L(QA,PA)	Transistor			2
D501,503,601,603, 701	MA150	Diode			5
D502,602	RD8.2E(B)	Zener Diode			2
D702	RD4.3E(B3)	"			1
R501,601	QRD143J-274S	C. Resistor	270kΩ	1/4W	2
R502,602	QRD147J-683S	"	68kΩ	"	2
R503,504,603,604	QRD143J-223S	"	22kΩ	"	4
R505,605	QRD147J-684S	"	680kΩ	"	2
R506,606	QRD143J-474S	"	470kΩ	"	2
R507,607	QRD143J-334S	"	330kΩ	"	2
R508,608,706,709	QRD143J-103S	"	10kΩ	"	4
R510,610,702,703	QRD147J-222S	"	2.2kΩ	"	4
R701	QRD143J-152S	"	1.5kΩ	"	1
R704	QRD147J-151S	C. Resistor	150Ω	"	1
R705	QRD147J-271S	C. Resistor	270Ω	"	1
R707,708	QRD143J-274S	"	270kΩ	"	2
R710	QRD143J-273S	"	27kΩ	"	1
R713	⚠QRD126K-220	"	22Ω	"	1
VR701	QVP8A0B-024	V. Resistor	20kΩ		1
VR501,601	QVP8A0B-023	"	2kΩ		2
C501,502,503,504, 601,602,603,604	QET41HR-474N	E. Capacitor	0.47μF	50V	8
C701	QET41AR-476N	"	47μF	10V	1
C702	QCF11HP-473	C. Capacitor	0.047μF	50V	1
C703,707	" -103	"	0.01μF	"	1
C704,705	QET41HR-475N	E. Capacitor	4.7μF	"	2
C706	QET41AR-476N	"	47μF	10V	1
C708	QET41ER-107N	"	100μF	25V	1
C709	QET41HR-105N	"	1μF	50V	1
	V44611-008	Formed Bus Wire	10mm		1
	E43727-002	Wrapping Tab			7
	QMV5005-006	Plug Ass'y	CN701		1

Display Schematic Diagram

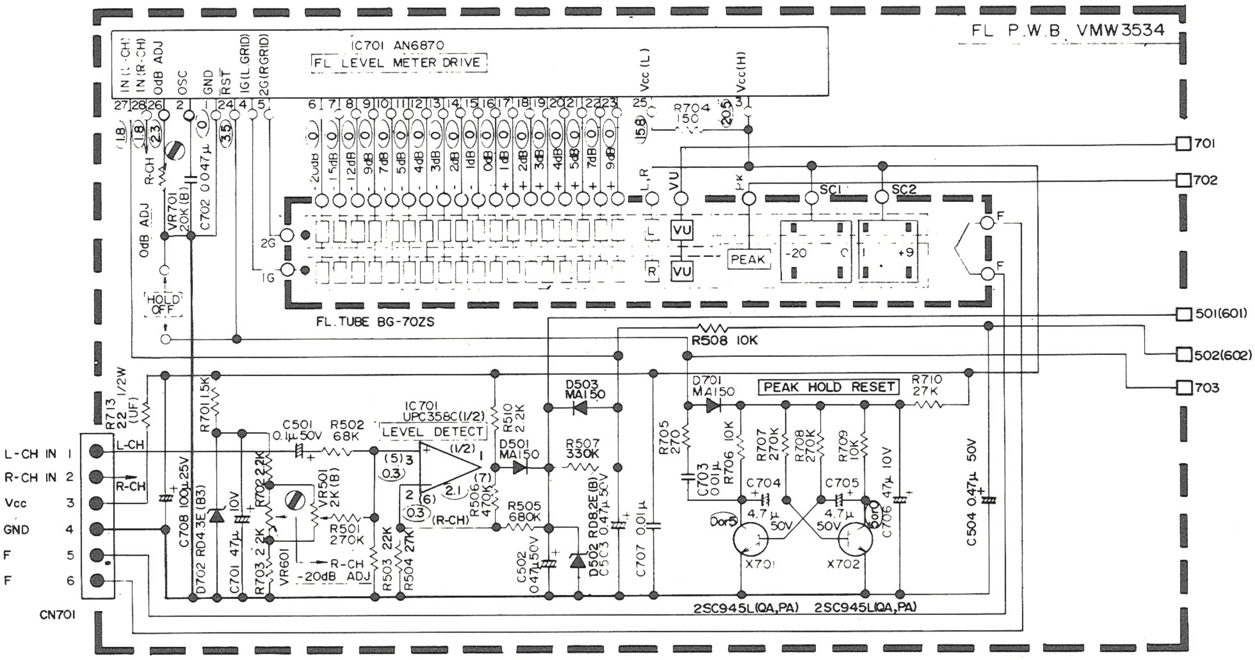
FL P.W.B VMW3534
IC701 AN6870
FL LEVEL METER DRIVE
IN (L-CH)
IN (R-CH)
0dB ADJ
OSC
GND
RST
1G(L GRID)
2G(R GRID)
Vcc(L)
Vcc(H)
R704 150
VR701 20K(B)
C702 0.047μ
0dB ADJ
HOLD OFF
-20dB -15dB -12dB -9dB -7dB -5dB -4dB -3dB -2dB -1dB 0dB +1dB +2dB +3dB +4dB +5dB +7dB +9dB
L,R
VU
PK
SC1
SC2
PEAK
-20
+9
2G
1G
F
FL.TUBE BG-70ZS
701
702
501(601)
502(602)
703
R508 10K
R713 22 1/2W (UF)
R701 1.5K
C501 0.1μ 50V
R502 68K
IC701 UPC358C(1/2)
LEVEL DETECT
R510 2.2K
D503 MA150
D501 MA150
R507 330K
D701 MA150
PEAK HOLD RESET
R710 27K
R705 270
C703 0.01μ
R706 10K
R707 270K
R708 270K
R709 10K
C704 4.7μ 50V
C705 4.7μ 50V
C706 47μ 10V
C504 0.47μ 50V
L-CH IN 1
R-CH IN 2
Vcc 3
GND 4
F 5
F 6
CN701
L-CH
R-CH
C708 100μ 25V
D702 RD4.3E(B3)
C701 47μ 10V
R702 2.2K
R703 2.2K
VR601
VR501 2K(B)
R501 270K
R-CH -20dB ADJ
R503 22K
R504 27K
R506 470K
R505 680K
(R-CH)
C502 0.47μ 50V
D502 RD8.2E(B)
C503 0.47μ 50V
C707 0.01μ
X701
X702
2SC945L(QA,PA)
2SC945L(QA,PA)

Fig. 36

Motor Schematic Diagram

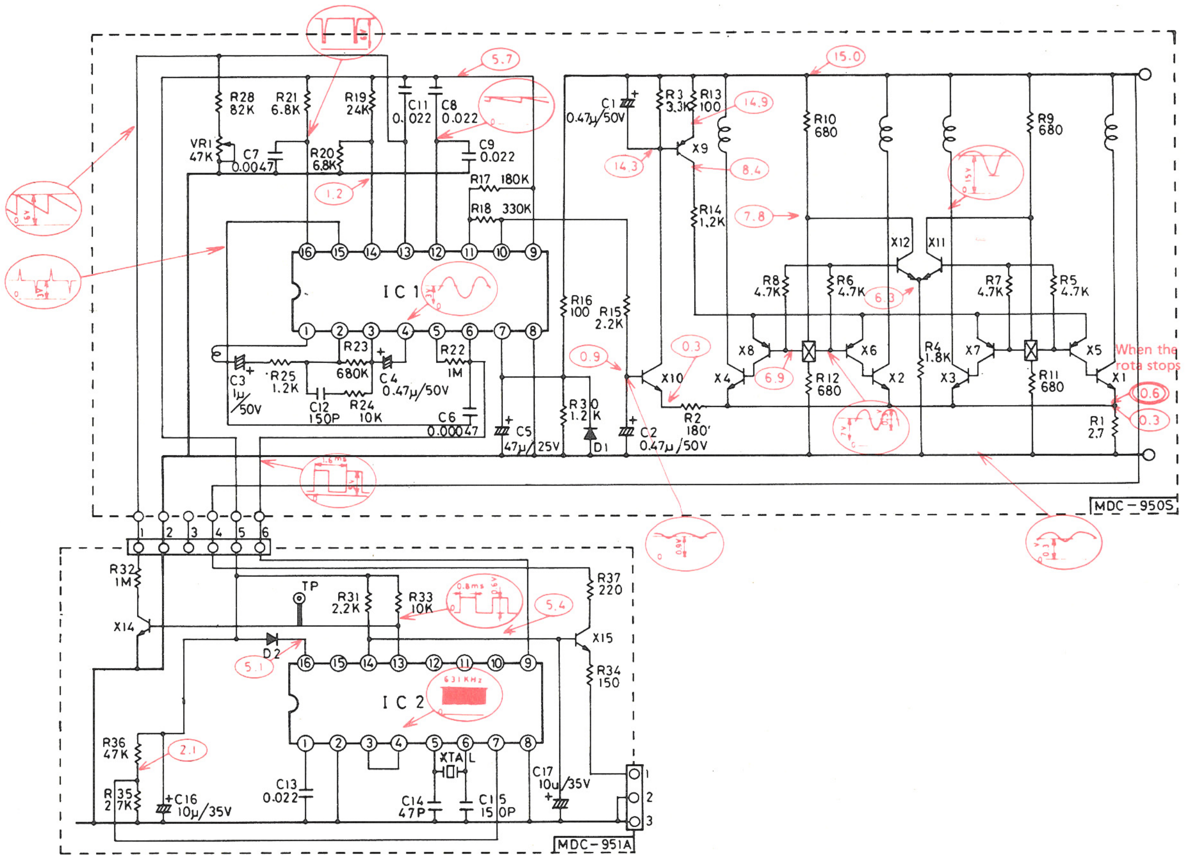
R28 82K
R21 6.8K
R19 24K
C11 0.022
C8 0.022
VR1 47K
C7 0.0047
R20 6.8K
C9 0.022
R17 180K
R18 330K
IC1
R23 680K
R22 1M
C3 1μ 50V
R25 1.2K
C4 0.47μ/50V
C12 150P
R24 10K
C6 0.00047
C5 47μ/25V
R16 100
R15 2.2K
R30 1.2K
D1
C2 0.47μ/50V
C1 0.47μ/50V
R3 3.3K
R13 100
X9
R14 1.2K
R10 680
R9 680
X12
X11
R8 4.7K
R6 4.7K
R7 4.7K
R5 4.7K
X8
X6
X7
X5
X10
X4
X2
X3
X1
R4 1.8K
R12 680
R11 680
R2 180
R1 2.7
MDC-950S
1 2 3 4 5 6
R32 1M
X14
TP
R31 2.2K
R33 10K
R37 220
X15
R34 150
D2
IC2
R36 47K
R35 2.7K
C16 10μ/35V
C13 0.022
C14 47P
XTAL
C15 150P
C17 10μ/35V
MDC-951A
5.7
15.0
14.9
14.3
8.4
1.2
7.8
6.3
0.9
0.3
6.9
When the rota stops
0.6
0.3
5.4
5.1
2.1
0.8ms
631KHz

Fig. 37

Motor Circuit Parts List

Ref. No.	Parts No.	Parts Name	Remarks	Q'ty
R1	QRD143J-272S	C. Resistor	2.7kΩ 1/4W	1
R2	″ -181S	″	180Ω ″	1
R3	″ -332S	″	3.3kΩ ″	1
R4	″ -182S	″	1.8kΩ ″	1
R5,7,8	″ -472S	″	4.7kΩ ″	3
R6,36	″ -473S	″	47kΩ ″	2
R9,10	″ -681S	″	680Ω ″	2
R11,12	QRD141J-681S	″	680Ω ″	2
R13,16	QRD143J-101S	″	100Ω ″	2
R14,25,30	″ -122S	″	1.2kΩ ″	3
R15,31	″ -222S	″	2.2kΩ ″	2
R17	″ -184S	″	180kΩ ″	1
R18	″ -334S	″	330kΩ ″	1
R19	″ -243S	″	24kΩ ″	1
R20,21	″ -682S	″	6.8kΩ ″	2
R22,32	″ -105S	″	1MΩ ″	2
R23	″ -684S	″	680kΩ ″	1
R24,33	″ -103S	″	10kΩ ″	2
R28	QRV146F-823	M. Resistor	82kΩ ″	1
R34	QRD143J-151S	C. Resistor	150Ω ″	1
R35	QRD143J-273S	C. Resistor	27kΩ ″	1
R37	″ -221S	″	220Ω ″	1
VR1	RVAH306-473	V. Resistor	47kΩ	1
C1,2,4	QET41H-474	E. Capacitor	0.47μF 50V	3
C3	″ -105	″	1μF ″	1
C5	″ -476	″	47μF ″	1
C6	QFN41HK-471	M. Capacitor	470pF ″	1
C7	QFM41HK-472	″	0.0047μF ″	1
C8,9	″ -223	″	0.022μF ″	2
C11	APS223J50-223	Film Capacitor	(or J100) 0.022μF	1
C12,15	QCT05CH-151	C. Capacitor	150pF 50V	2
C13	QCF11HP-223	″	0.022μF ″	1
C14	QCT05CH-470	″	47pF ″	1
C16,17	QET41V-106	″	10ΩF 35V	2
D1,2	1SS53	Diode		2
X1～4	2SC2001(K.L)	Transistor		4
X5～8	2SA733(P.Q)	″		4
X9	2SA733(P.K)	″		1
X10～12	2SC945(P.K)	″		3
X14,15	2SC945(P.K.Q)	″		2
IC1	VC1029	IC		1
IC2	MSL9348	″		1
XTAL	M40455	X'TAL		1
	M30997A	Bearing Holder Ass'y		1
	M30998A	Yoke Plate Ass'y		1
	MC951A	Motor Ass'y		1

Other P.W. Board Parts

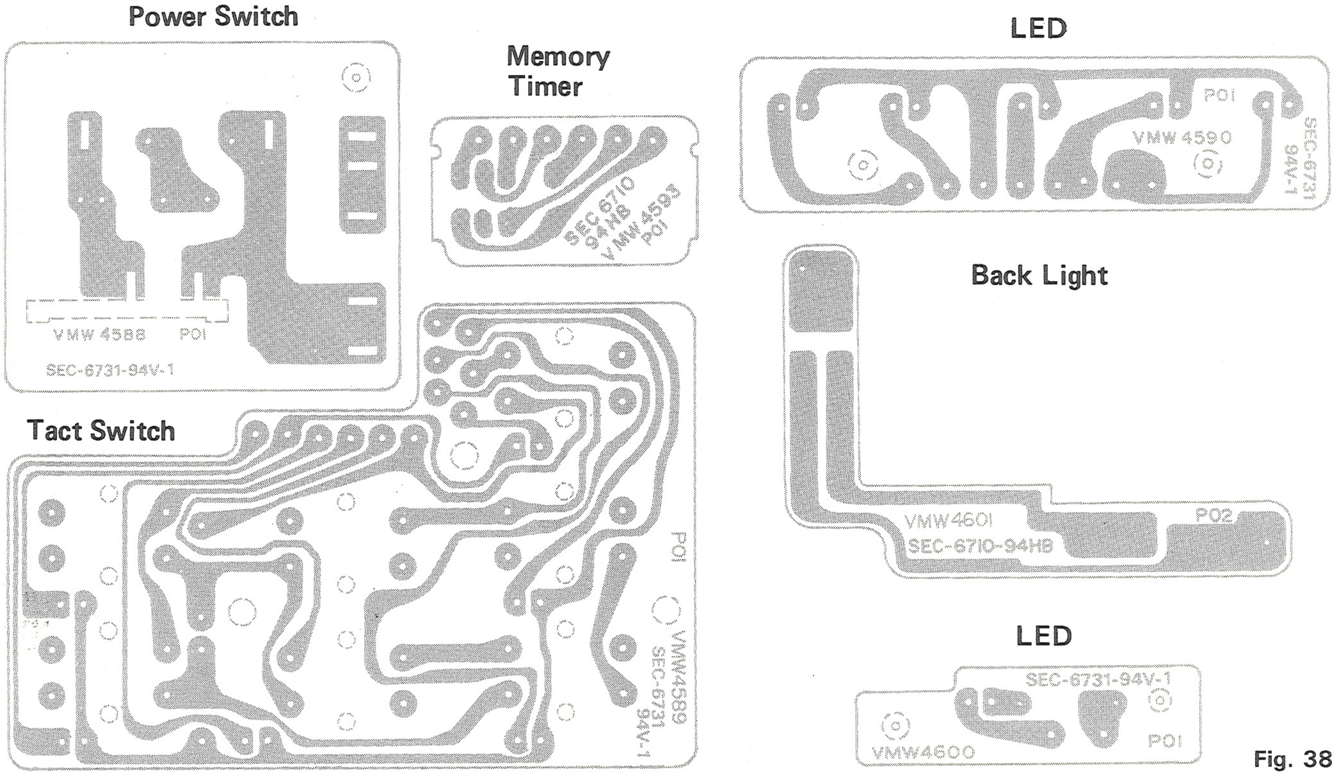
Power Switch
VMW 4588
PO1
SEC-6731-94V-1
Memory
Timer
SEC 6710
94HB
VMW 4593
PO1
LED
PO1
VMW 4590
SEC-6731
94V-1
Back Light
VMW4601
PO2
SEC-6710-94HB
Tact Switch
PO1
VMW4589
SEC-6731
94V-1
LED
SEC-6731-94V-1
VMW4600
PO1

Fig. 38

Other P.W. Board Parts List

⚠ parts are safety assurance parts.
When replacing those parts, make sure to use the specified one.

Ref. No.	Parts No.	Parts Name	Remarks	Q'ty
(Back light)				
	VMW4601-001	P.W. Board		1
	LD-702	L.E.D		1
(Power Switch)				
	VMW4588-001	P.W. Board		1
	⚠ QSP1110-305BS	Push Switch	DD-7B	1
	⚠ QSP1110-305	″	DD-7A/E	1
	⚠ QSP1110-308	″	DD-7C/J	1
	⚠ QSP1110-306	″	DD-7U	1
C01	⚠ QFZ9010-103	C. Capacitor	DD-7A/B/E	1
	⚠ QCZ9014-103	″	DD-7C/J	1
	⚠ QCZ9015-103	″	DD-7U	1
R01	⚠ QRD149J-820S	C. Resistor	82Ω 1/4W	1
	⚠ E40130-001	Tab		3
(Timer Switch)				
	VMW4593-001	P.W. Board		1
	QSS2301-102	Slide Switch		1
(Memory Switch)				
	VMW4593-001	P.W. Board		1
	QSS2301-102	Slide Switch		1
(Tact Switch)				
	QSP0021-002A	Tack Switch		7
	SLP-155B-01V	LED		2
	SLP-255B-01V	″		4
	QRD147J-471S	C. Resistor	470Ω 1/4W	1
	QRD147J-391S	C. Resistor	390Ω ″	2
(LED)				
	VMW4600-001	P.W. Board		1
	QRD147J-560S	C. Resistor	56Ω 1/4W	1
	SLP-255B-01V	LED		1
(LED)				
	VMW4590-001	P.W. Board		1
	SLP-255B-01V	LED		5
	VKS4006-001	CANOE Clip		1

Packing

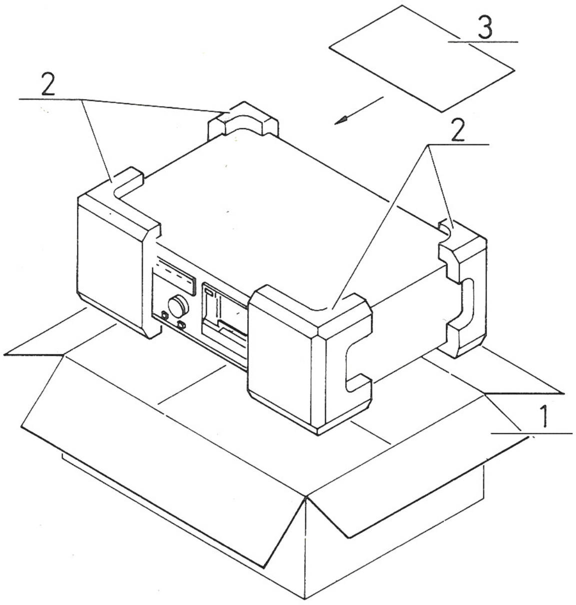

Fig. 39

Position of controls and switch knobs at renew packing.

Power switch : OFF
Timer switch : OFF
Auto Rew switch : OFF
Output level control : MAX
Input level control : MIN
ANRS switch : OFF
Tape select switch : SF/NORM
REC EQ : center
Monitor : SOURCE
Meter : VU
Counter : 000
Mecha operation buttons : OFF

Packing Material Parts List

Ref. No.	Parts No.	Parts Name	Remarks	Q'ty
1 ~ 2	VDP2075-002A	Packing Case Ass'y	DD-7A/B/E/J/U	1 set
1 ~ 2	VDP2075-003A	″	DD-7C	1 set
1	VPD2075-J02	Case	DD-7A/B/E/J/U	1
1	VPD2075-J03	Case	DD-7C	1
2	VPH3114-001	Cushion	Left	1
	VPH3115-001	Cushion	Right	1
	QPGA050-06005	Envelope	for Cassette Deck	1
	AP4056A-036	″	for Power Cord and Provided Cord	2
3	AP4056B-077		for Instruction Book	1
	TKS000501-08	Sheet	for Cassette Deck	1

Sticker

Parts No.	Parts Name	Remarks	Q'ty
VNF0070-001	Feature Sticker	DD-7A/C/J/U	1
VNF0070-002	″	DD-7B/E	1
VND4042-001	Caution Sticker	Timer Safty Lock Caution	1

Accessories

Parts No.	Parts Name	Remarks	Q'ty
VMP0002-00B	Pin Cord		2
VYA4001-00A	Head Cleaning Stick		1
VNN0070-901	Instruction Book	DD-7A/C/J/U	1
VNN0070-301	Instruction Book	DD-7B/E	1
VND4016-001	Metal Sticker		1
BT20029B	Warranty Card	DD-7A	1
VND4013-001	Warning Label	for Disconnection DD-7A/B/E	1
BT20013C	Guarantee Certificate	DD-7B	1
TJL000443-01	Seal	Made in Japan DD-7B	
QZL1002-003BS	Warning Label	for 2 Pin Power Cord DD-7B	1
T46328-003	Caution Label	for V. Selector DD-7B	1
VNC5004-001	Mark Sticker	DIN45500 DD-7B/E	1
BXN750110UU	JVC Microphone Guide	DD-7B/E	1
BT20025D	Warranty Card	DD-7C	1
TLT000505-01	UL/CSA Caution Label	DD-7C/J	2
T46328-004	Caution Label	for V. Selector	1
BT20032B	Warranty Card	DD-7J	1
BT20042	Special Reply Card	DD-7J/U. for PX, EES	1
BT20044B	Safety Instruction	DD-7J	1
BT20032B	Warranty Card	for PX, EES, DD-7U	1
E7795-1	EP Mark	″ DD-7U	1
VNC5311-101	Caution Card	for EES, DD-7U	1
V04062-001	Siemens Plug	DD-7U	1
T46328-001	Caution Label	DD-7U	1

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